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III/79

Part II.

Statement showing the progress made by local Governments and Administrations in giving effect to the recommendations of the Royal Commission on Agriculture in India with which they are concerned.

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PART II.

Statement showing the progress made by local Governments and Administrations in giving effect to the recommendations of the Royal Commission on Agriculture in India, with which they are concerned.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
CHAPTER III.—The organisation of Agricultural Research. 1. Constitution of Provincial Committees to co-operate with the Council of Agricultural Research (paragraph 57).	**Madras.**—A committee of officials and non-officials has been constituted to advise on the lines on which effect could be given to the recommendations of the Royal Commission. This will serve as the Provincial Committee contemplated by the Commission. **Bombay.**—The question is under consideration. **Bengal.**—The question is under consideration. **United Provinces.**—The Government have decided on the composition of the proposed committee and formal orders will issue as soon as replies have been received from the proposed members accepting membership. **Burma.**—The question is under consideration. **Bihar and Orissa.**—The recommendation has been accepted and details are being worked out. The Provincial Committee will soon be constituted. **Central Provinces.**—An Advisory Board of Agriculture already exists. This can be expanded, if necessary, to deal with agricultural research.
CHAPTER IV.—Agricultural Improvement. 2. Progress of research work on Soils and Soil Conditions (paragraph 78).	**Madras.**—Proposals are under the consideration of Government for the appointment of a Soil Physicist. The estimated cost is Rs. 10,053 per annum. **Bengal.**—The recommendations are accepted in principle but financial reasons stand in the way of formulating any definite scheme. **United Provinces.**—With the exception of some research work on "Root development in rice under different conditions of growth" which touched in some parts on soil conditions no other research on soils has been done this year. **Punjab.**—No special work has been taken in hand as a result of the Commission's Report, but soil analysis forms part of the routine work of the Chemical Section and is always in progress. **Burma.**—No action is necessary at present. **Bihar and Orissa.**—The local Government agree that there is much scope for work in many directions on soils and soil conditions more particularly where rice is grown. To deal adequately with these problems would mean a recurring expenditure of some Rs. 50,000 which the local Government do not feel justified in proposing now or in the next few years. These problems are common to several provinces and the local Government consider that they should be examined by the Imperial Council of Agricultural Research at an early date and a co-ordinated scheme for adequate research in soil science framed by that body. **Central Provinces.**—Research work on soils and soil conditions has already taken and will continue to take a prominent place in the work of the Agricultural Department, particularly of the Chemical Section.

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3. Soil erosion (paragraph 79). (Special to U. P., Bombay, Punjab, Bengal and B. and O.)	**Bombay.**—The local Government hope to extend the scheme of *bunding* and land development by increasing the number of *bunding* officers as funds permit. **Bengal.**—The local Government accept the recommendation. The feasibility of the methods suggested is being investigated. **United Provinces.**—Some parts of this province suffer severely from such erosion. The zamindars and cultivators of villages thus affected would welcome any steps taken to remedy the evil, but at present, as far as engineering remedies are concerned, neither the staff nor the funds are available to carry out investigations or remedial measures. The latter are likely to be costly. However, it is now proposed that a third temporary circle of superintendence should be organised to include the investigation of this and other questions. The Forest Department has been working on the problem for some years. In brief the results are :—(a) Erosion in bad ravine country (Chambal and Jumna) can be mitigated, if not entirely stopped, by mere closure, provided a strip of land about 50 yards wide at the head of the ravines is available. This strip is usually agricultural land. (b) The process is certainly assisted by afforestation, but large areas of ravine country cannot be successfully afforested on account of adverse physical and climatic conditions. (c) Even where afforestation is possible, most of the bad ravine country is too far from markets for commercial success. (d) There are very large tracts of waste land in the provinces in which afforestation is a practicable proposition, and a financial return may be anticipated. These lands consist primarily of wild ravine country and tracts known as *Bhur* which are too sandy for agriculture. There are also large tracts of *Usar* land which probably cannot be afforested, but make excellent fodder reserves. Detailed proposals for further action have been made by the Chief Conservator of Forests, and are under consideration. *Bunding* arrangements have in some cases satisfactorily checked the tendency shown by ravine tracts to cut back into arable land. Plantation with *babul* trees in Bundelkhand has been tried successfully and there is a ready market for *babul* bark in the tanneries of Cawnpore. **Bihar and Orissa.**—The *Kanke* system of high level contour *bandhs* is definitely successful in the Ranchi Districts. The local Government have sanctioned a special temporary staff for the purpose of carrying out surveys and assisting in the alignment of the *bandhs*. A proposal is under consideration for deputing an officer of the Agricultural Department to examine the Bombay system in order to ascertain whether any improvements can be effected in the methods at present adopted in Chota Nagpur.
4. Work on Fertilisers (paragraphs 80-93).	**Madras.**—The Agricultural Advisory Committee considered the recommendations contained in these paragraphs. It was of opinion that research should continue on the lines now followed and that the Agricultural Department should collect information and publish it. It was also suggested that a consolidated bulletin giving the results about manures arrived at so far and about which the department is certain may be published. This Government have approved the proposals of the Director of Agriculture for starting subsidised manurial stations where the artificial manures placed on the market by the manufacturing firms will be tested in respect of each crop so that the Agricultural Department may be in a position to advise ryots as to the particular manure suited for a particular crop and for a particular locality A beginning has been made with a station for work on paddy. The station involved a non-recurring expenditure of Rs. 250 and a recurring expenditure of Rs. 1,400 per annum. Other crops will be dealt with in due course as men and money are available.

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Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	With a view to prevent the use of farmyard manure as fuel for domestic purposes, it has been suggested that an investigation should be made as to whether ryots may not be allowed to grow trees other than fruit trees on minor channel banks and take the wood free. On the advice of the Advisory Committee, the Government also propose to advice Municipal Councils to convert night soil into poudrette and sell it in neighbouring villages, transporting it in lorries or municipal carts. The Agricultural Department has already installed an activated sludge plant at the Agricultural College Estate, Coimbatore, for the purpose of converting night soil into manure. With regard to the Commission's recommendations regarding green manure crops, the Advisory Committee was satisfied that suitable action was already being taken by the Agricultural Department in the matter. **Bombay.**—The question is under consideration. **Bengal.**—The local Government accept the recommendation. The lines of work suggested as regards manurial experiments are being followed. **United Provinces.**—Some experiments with artificial fertilisers have been made by the Agricultural Department in conjunction with the Irrigation Department in the course of work to determine the best methods of using canal water now being provided in the Sarda area. The main work, however, has been done on green manuring. Work on composts and on the activated sludge process is being carried on at the Technological Institute at Cawnpore (Industries Department). The Director of Agriculture expresses the opinion that there will be no difficulty in selling oil-cake meal of not under 4½ per cent. nitrogen content for manure at rates not above Rs. 2 per maund. The return from the use of bone-meal is spread over a number of years and is not immediately apparent as in the case of nitrogenous fertilisers. The Director does not anticipate that it will be widely taken up even if sold at a low price. It is useful in conjunction with green manure and its use will probably increase in proportion to the increase in green manuring. He suggests a small experimental crushing plant in one of the areas, where hydro-electric power will soon be available, as soon as funds can be spared, in order to obtain experience of the cost of production. The Co-operative and Public Health Departments have done some work to educate villagers in the better conservation of manure and refuse. Nominal rates for water, viz., Re. 1 per acre flow and annas 8 per acre lift, have been fixed this year for green manuring. Active propaganda is being initiated to further this scheme, and the areas in which this concession has been used are being carefully watched. **Punjab.**—A large number of experiments with artificial fertilisers are being conducted on the various experimental farms of the Department and on the lands of private zamindars. Experiments on manure composts have been taken up in the Kangra Valley by the Agricultural Chemist and the Deputy Director of Agriculture, Jullundur Circle. **Burma.**—A programme of experiment with the object of ascertaining with exactitude the extent to which fertilisers can profitably be used has been formulated. The Director of Agriculture is dealing with the question of the steps which should be taken to promote the preservation of such farmyard manure as is not diverted to consumption as fuel. The problem of poudrette will be taken up in due course. Beyond this it is not considered that any action is required.

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	Bihar and Orissa.—Recommendations 11, 13, 14, 15, 16, 18, 19, 21, 26, 27, 28 and 29 in para. 117 of the Report are accepted. On the various farms of the Department carefully planned manurial experiments, so planned as to permit of statistical interpretation of the results, are already undertaken. Such work will be expanded and developed as the staff and resources of the Agricultural Department permit. The Agricultural Department will prepare a leaflet "Agricultural notes for rural uplift workers" which will include such general recommendations for agricultural improvements as all unofficial workers can safely advocate. In this leaflet the better conservation of natural manures will be dealt with. The last sentence of paragraph 88 of the Commission's report is not strictly accurate now, ammonium sulphate and the more expensive artificial manure ammophos are definitely profitable on rice cultivation in certain tracts and the use of these fertilisers is spreading. **Central Provinces.**—The economic use of fertilisers is being demonstrated and will continue to be the subject of further experiment. The results of past experience are also being collected and examined. Arrangements for supply on a commercial scale have been organized.
5. Introduction of Improved Varieties of Crops (paragraphs 97-103).	**Madras.**—The Agricultural Department is already following the policy enunciated by the Commission that no new variety should be put out unless it has been thoroughly well established that it possesses marked advantages over those already grown and that improved varieties should be thoroughly tested in the conditions under which they would be grown by the cultivator. The Agricultural Advisory Committee was of opinion that steps should be taken by the Director of Agriculture to increase the supply of good seed whether by opening or extending seed farms or by other means. Action will be taken to give effect to the recommendation. **Bombay.**—The need for the kind of work recommended in para. 97 of the report is great since, with the exception of one rice-breeding station, there is no other special cereal breeding station. The establishment of a new station for wheat breeding and the multiplication of improved wheat seed in the Nasik district, which contains 25 per cent. of the total wheat area of the Presidency proper, is under consideration. **Bengal.**—The local Government agree generally. The policy underlying the recommendations of the Commission regarding seed distribution is being followed. **United Provinces.**—The work already in progress in popularising varieties which have proved suitable for the province has been continued. There has been a further large increase in the area in Rohilkhand under improved sugarcane. The failure of the wheat crop in 1928 in Bundelkhand owing to rust produced a large demand for seed and the opportunity was seized and large supplies of Pusa wheat were purchased by the Agricultural Department and issued in that area. The cultivators were given the seed on credit and the price recovered in cash, a form of *takavi* loan. Wheat and grain seed was similarly distributed in the Benares District and appreciated. Similar operations with good rice seed were conducted on a smaller scale in the Gorakpur District. Work on cotton continued at Raya (in the Muttra District) and some work has also been done on oil-seeds. The seed distribution operations of the Agricultural Department show a rapid increase

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	and the success of the policy of arranging for increased supplies of seed by grants-in-aid to private farms, on condition that a fixed quantity of seed is supplied at a specified price, is exceeding expectations. Expansion of the departmental seed operations is mainly a matter of funds; and for the moment money spent in this way through the Agricultural Department is more productive of quick results than attempts to develop co-operative organisations for the purpose. One or two experiments are, however, also being made with the latter method, and rural reconstruction societies in the Benares and Partabgarh Districts have made the supply of improved seed to be sown by improved methods of cultivation a chief item in their work. Rs. 1,40,000 for increased purchases of seed was provided in the budget of the current year for Agricultural Department seed stores. It has not proved practicable yet to put a special officer in charge of seed distribution. The work is self-supporting but its constant expansion means that new working capital has to be provided. The supply of seed has been the most important single item of the work of the Agricultural Department during the past year. **Punjab.**—Work previously in hand on the improvement of crop varieties, rotations and methods of tillage has continued and has been expanded. **Burma.**—Paragraphs 117 (52) and (53).—The Director of Agriculture has been instructed to prepare a comprehensive progressive programme for annual development of seed farms for the approval of the local Government. Paragraphs 117(54)-(57).—The Director has been asked to report on these recommendations. It is not considered that any action beyond what is being done at present is required in regard to the remainder of the recommendations under this head. **Bihar and Orissa.**—The local Government have under consideration a proposal for the strengthening of the Botanical Section for general research on crops at an estimated recurring cost of Rs. 6,000 a year. A scheme for rice research at an estimated cost of Rs. 2,05,000 non-recurring and Rs. 1,10,000 recurring is also under consideration. The following recommendations have been accepted in principle and will be given effect to as need arises and funds permit :— (1) Provision of seed stores for distribution of seeds (paragraph 101).—A permanent advance of Rs. 1,00,000 has been sanctioned from April 1929 to enable the Department to carry more adequate stocks of seed. It is hoped to establish several seed stores at a cost of Rs. 5,500 to Rs. 6,500 (non-recurring) for each store; five such stores will be required very soon. For further ultimate expansion, the cost will be Rs. 1,20,000 non-recurring and Rs. 15,500 recurring. It is definitely the policy of Government to develop co-operative seed distribution. Useful work is already being done by a number of central banks. The Registrar of Co-operative Societies and the Director of Agriculture have formulated a scheme for future development. A system of registered seed growers, who will multiply pure seed for general distribution, has also been started. (2) Establishment of seed Farms (paragraph 103).—Each farm will cost Rs. 1½ lakhs to start with and to provide one such farm for each important tract the expenditure will be Rs. 12 lakhs non-recurring and Rs. 1½ lakhs recurring. Before contemplating such expenditure the organisation of the seven Range farms sanctioned at present will have to be completed and it will be some years before any effect can be given to this recommendation.

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	(3) Evolution of pure and improved seed (paragraph 103).—Under the conditions prevailing in Bihar and Orissa, special crop farms are not so much needed as farms for particular tracts. Government agree, however, that these crops should receive a due share of attention. No financial proposals are made at present. (4) Organisation for seed distribution (paragraph 103).—The statement that seed distribution and testing is the work of the Agricultural Department and will remain a heavy charge on its resources is correct, but it is not proposed to employ any special staff for this work at present. **Central Provinces.**—Special attention is being paid to the improvement of the staple crops of the province, viz., cotton, rice and wheat.
6. Research and Experiment on Rotations and Methods of tillage (paragraph 104).	**Madras.**—The Agricultural Department is already taking suitable action in this direction. **Bengal.**—The local Government accept the recommendation. **United Provinces.**—Experiments and demonstrations of proved methods are continually in progress. **Punjab.**—The work previously in hand has continued and has been expanded. **Burma.**—No special action is required beyond what is already being done. **Bihar and Orissa.**—The recommendation has been accepted. A "better farming" campaign is being undertaken in parts of North Bihar on an experimental scale. **Central Provinces.**—Particular attention is being given to rotations suitable for irrigated crops, *e.g.*, paddy and pulses, and for unirrigated crops, *e.g.*, cotton and groundnut.
7. Mass production of Wooden Parts of Agricultural Implements (paragraph 105).	**Madras.**—The recommendation of the Commission was considered by the Advisory Committee who were not in favour of it. **Bengal.**—The matter is receiving the attention of the newly appointed Agricultural Engineer of this province. **United Provinces.**—Nothing has yet been done. **Burma.**—No special action is required beyond what is already being done. **Bihar and Orissa.**—Efforts will be made to give effect to this recommendation. **Central Provinces.**—This has not yet been attempted as the village carpenter fulfils present requirements. Suitable timber is generally available locally.
8. Organisation of the Agricultural Engineering sections of the Agricultural Departments (paragraph 106).	**Madras.**—The Royal Commission recommend that the engineering section of the Agricultural Department should be divided into two branches, one of which would concentrate solely on work on agricultural machinery and implements and the other on pumping and boring, that, in provinces like Madras where wells are numerous, work on water lifts might be entrusted to a third and separate branch and that these branches should be under the technical control of a senior engineer who would himself be under the general control of the Director of Agriculture. In this Presidency, however, the work connected with pumping and boring has been transferred to the Department of Industries which has got an Industrial Engineer for the purpose. This officer has in addition to pumping and boring to attend to the erection of industrial plant and new power installations, maintenance of industrial machinery and investigation of loans under the Agriculturists' Loans Act and of certain applications under the State Aid to Industries Act.

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	For research work in connection with agricultural machinery and implements, a separate officer called the Research Engineer has been appointed under the Agricultural Department. These officers have special qualifications for the work entrusted to them. One officer cannot attend to both these duties and the present arrangement has been working satisfactorily and does not in the opinion of this Government require any change. **Bengal.**—The Government prefer to await further experience of work of its Agricultural Engineer before committing itself to any opinion on these recommendations. They agree in principle that the officer in charge of the work on agricultural machinery and implements should be primarily an engineer and secondarily a farmer. **United Provinces.**—*Vide* remarks against item 9 below. **Punjab.**—The engineering section of the Punjab Agricultural Department has already been organised on the lines recommended by the Royal Commission. **Burma.**—The post of Agricultural Engineer is now included in the Burma Agricultural Service, Class I. There is no reason why his section should be treated differently from the others. His staff has been included in the cadres of the Burma Agricultural Service, Class II, and the Subordinate Agricultural Service, the draft rules of which will shortly be considered by Government. The present Agricultural Engineer is primarily an engineer and secondarily a farmer. **Bihar and Orissa.**—The recommendation for the organisation of the agricultiral engineering section with a view to make it an integral part of the Agricultural Department has already been accepted in principle as that section was organised recently and placed on a better footing. Further effect will be given to this recommendation at an ultimate cost of about Rs. 1,800 a year. The recommendation for the division of the engineering section into two branches, one for work on agricultural machinery and implements and the other for pumping and boring, has been reserved for future consideration. The cost would be approximately Rs. 20,000 a year. The work on water-lifts in Bihar and Orissa is closely connected with the improvement of wells and the two sections of the work are under one officer. If power pumping from tanks and streams develops in the future, a mechanical engineer will be required. The cost including a qualified workshop superintendent and additional subordinate staff will be Rs. 24,000 recurring, while a properly equipped workshop will cost about Rs. 1,00,000 non-recurring. **Central Provinces.**—An Agricultural Engineer has recently been engaged.
9. Research work on Agricultural Implements and Machinery (paragraphs 107-108).	**Madras.**—A Research Engineer was appointed last year and is attending to these problems. He has examined several implements forwarded by manufacturing firms and has suggested improvements which have been adopted by them. **Bengal.**—The recommendations are accepted. **United Provinces.**—The agricultural engineering section was already an integral part of the Agricultural Department of the Province. The past year has seen a reorganisation of its personnel under a senior enginneer from the well-boring division of the Public Health Department brought in temporarily for the purpose. There has been a great increase in efficiency and in the speed of construction. Works is still, however, almost entirely confined to wells, but when the reorganisation is complete, work on other machinery and implements will be taken up. The prospect of hydro-electric power being available shortly for well pumping for agricultural purposes in the western districts of the province

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	gives hope of a great expansion in this form of irrigation, and interesting experiments are now in progress. The financial success of the hydro-electric schemes partly depend on an extensive use of current for well irrigation, and every effort will, therefore, be made to develop a demand for it. Current for the purpose will be supplied at a cost of one anna per unit. Experiments with a small five-roller power cane crusher have given very promising results. Some progress has also been made in investigating the economics of power cultivation with *kans* eradication in *kans* infested tracts in Bundelkhand. Progress is slow and expensive, and definite conclusions have not yet been reached. **Punjab.**—Some progress has been made in the evolution of certain agricultural implements and machinery, *e.g.*, winnowing machines, Persian wheels and ploughs. A proposal to appoint an Engineer for work on agricultural machinery and implements is under the consideration of Government. **Burma.**—The capacity of the cattle governs the sale of the implements, and no special investigation is required. As regards the other recommendations, no special action beyond what is being done is required. **Bihar and Orissa.**—The recommendation for an investigation of the relation of the capacity of draught cattle to the implements they are required to draw is accepted, but no effect can be given to it as it is not proposed to appoint a special engineer for research at present. Preliminary work on this problem should be undertaken by the Central Research Council or at the Pusa Research Institute. Every Deputy Director of Agriculture does carry on a certain amount of experimental work in this direction, but it is difficult to do much without a special staff. **Central Provinces.**—The economics of ploughing with a steam tackle, based on three years' experience, is now being investigated by the newly appointed Agricultural Engineer.
10. Attention to problems of cultivation in Dry and Precarious Tracts (paragraph 112).	**Madras.**—The Agricultural Advisory Committee have suggested the starting of a farm to study dry tracts with red soil. Proposals are under the consideration of Government for opening a millet station at Adoni to serve the Ceded Districts. It involves a non-recurring expenditure of Rs. 1,79,350 and a recurring expenditure of Rs. 31,597 per annum. **Bengal.**—The recommendation is accepted. **United Provinces.**—No special success is reported. A farm in Banda and the new farm in the hill circle provide material for work of this type. **Punjab.**—A certain amount of attention has been paid to *barani* cultivation in unirrigated tracts, and recently a farm of about 500 acres has been opened at Sirsa which will be mainly utilised for dry-farming experiments ; also an experimental *barani* farm of 250 acres has recently been opened at Rawalpindi. A Millet Botanist was appointed in September 1927, who is giving his attention to work on these crops. **Burma.**—No action is required. The dry tracts of Burma are receiving as much attention as the wet. **Bihar and Orissa.**—The precarious tracts in Bihar and Orissa, broadly speaking, are :— (1) The flooded areas in Orissa. (2) The unirrigated rice tracts. (3) The uplands of Chota Nagpur. A farm for the study of the special problems in the flooded areas has been recently started at Kujang at an initial cost of Rs. 17,574 and recurring cost of Rs. 3,335. Two more such farms are needed at a cost of Rs. 50,000 non-recurring and Rs. 6,670 recurring.

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	The engineering section already assists cultivators and co-operative societies in the construction and repair of minor irrigation projects. It will be necessary to strengthen the staff in this section as need arises. The special problems connected with Chota Nagpur are under examination at Kanke and the small farms of the range. The recommendation is accepted in principle and effect will be given as funds permit. The ultimate cost will be Rs. 50,000 non-recurring and Rs. 18,200 recurring. **Central Provinces.**—In view of the fact that a large part of the land in the Central Provinces and Berar is unirrigated, most of the Agricultural Department's work done is with crops grown on water supplied by the rainfall alone.
11. Legislation to deal with Pests and Diseases (paragraphs 113 and 114).	**Bengal.**—Considers that the question of undertaking legislation in Bengal is premature. **United Provinces.**—No legislation has been undertaken or is at present under consideration. The Director of Agriculture is not in favour of legislation on the lines of the Madras Act at present. An interesting experiment is in progress with treatment of cotton seed by sun heat in a limited area, in an attempt to control the spread of the pink bollworm. **Punjab.**—Data has been collected during the year regarding the incidence of certain pests and diseases of fruit and farm crops with a view to determining whether there is a case for legislation. **Burma.**—The matter of the prevention of importation of pests and diseases from outside and of their internal control is receiving consideration and draft legislation has been prepared. **Bihar and Orissa.**—There is no necessity for such legislation in Bihar and Orissa at present. Before legislation is attempted, the scientific side of the case should be fully worked out and the problem clearly defined. **Central Provinces.**—No legislation on pests and diseases applicable to the Central Provinces and Berar alone has been put into force.
12. Protection against Wild Animals and Vermin (paragraph 116).	**United Provinces.**—No special action has been taken. The Chief Conservator reports that the bulk of the forests are near cultivation, and that it would be extremely difficult to make effective game sanctuaries of such blocks of forests as could be described as not being near cultivation. A great number of animals are killed in the neighbourhood of reserved forests, but it is impossible to distinguish between crop protection and killing for sport or meat. The Chief Conservator, however, considers that the number of deer in most divisions is too large for the welfare of fields and forests, and is likely to remain so. But in his opinion a policy of extermination is sure to be violently opposed from many quarters and such a policy is by no means as simple as it sounds as an efficient means of protection of forests or field crops. It is also repugnant to forest officers. He has recently submitted detailed proposals for the protection of young forest crops from deer by fencing. **Punjab.**—This line of work has been continued and developed. **Burma.**—The matter is receiving consideration. **Bihar and Orissa.**—The local Government do not propose to take any further action on this recommendation as there are quite a sufficient number of gun licences in existence at present. **Central Provinces.**—The use of wire fencing is demonstrated and arrangements are made to enable cultivators to purchase the same. Crop protection societies are being organized and the possibilities of co-operative fencing considered. The question of the damage done by wild animals from the forests is also under the consideration of the Forest Enquiry Committee recently appointed. Gun licences are freely given.

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CHAPTER V.—The Subdivision and Fragmentation of Holdings. 13. Action to deal with the problems presented by the Subdivision and Fragmentation of Holdings (paragraphs 124-127).	**Bengal.**—Some encouragement to the consolidation of holdings by exchange of lands amongst the raiyats has been given in the amended Bengal Tenancy Act by the reduction of the rate of landlords' fee to one-fourth of the normal transfer fee of 20 per cent of the consideration money. Subdivision of holdings is chiefly due to the Hindu and Muhammadan laws of inheritance and it is hardly possible to remedy the existing state of affairs by legislation. The matter will, however, be considered in connection with the recommendations made by the tenth Conference of Registrars of Co-operative Societies held in 1928. **United Provinces.**—Efforts for the consolidation of holdings have been made by the Co-operative Department, by District Officers, and by the Board of Revenue in the Court of Wards estates. Some success has been attained in the matter in the Districts of Bahraich, Partabgarh, Sultanpur and Benares The Co-operative Department work was undertaken in the Districts of Saharanpur and Bijnor, five societies being started in the former, and one in the latter. One honorary organiser assisted by a paid assistant, and by a supervisor *quanungo* on special duty was at work, but difficulties were experienced and the work is now at a standstill until a suitable organiser can be obtained. The Registrar of Co-operative Societies of the Punjab has been asked to lend this Government an expert. The question of legislation was considered by the Committee which dealt with the amendment of the Agra Tenancy Act. The consensus of opinion was that at the present stage of the movement any kind of compulsory legislation would do more harm than good by creating suspicion and antagonism, till opinion in the villages has been more familiarised with the idea. The Government accepted this view, and do not at present intend to legislate in the matter. They propose to continue their efforts along voluntary lines. Recent orders about partition procedure contain provisions aimed at preventing the increase of fragmentation of ownership. **Punjab.** The consolidation of holdings is being pressed and the staff for this purpose is all paid for by Government in the Co-operative Department and has been increased each year. **Burma.**—The opinion of revenue authorities and Divisional Commissioners has been asked for before coming to a final conclusion. **Bihar and Orissa.** The Punjab method of consolidation is not applicable to the conditions of Bihar. The method depends for its success, on three factors, none of which is present in Bihar and Orissa, namely, uniformity of tenure, uniformity of soil, and adequate *mufassal* agency in touch with the people. The Co-operative Department is not in a position to undertake the work. The local Government, therefore, consider that any general measure to promote consolidation in the province is impracticable. It is possible that an experiment on co-operative lines might be made in some of the Government estates and the local Government are investigating the practical possibility of such an experiment in the Khurda Khas Mahal estate in Orissa. The local Government are not prepared to undertake propaganda work as they consider it useless to do so where they have no practical solutions to offer. They also consider that in any case legislation at present would be premature, but they accept in theory the legislative principles formulated by the Commission.

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	They do not accept the recommendation that revenue should be remitted on consolidation but they agree that consolidation should not be made a ground for enhancement of rent. They agree to provide, as opportunity occurs, for reduction of mutation fees on exchange of land made for the purpose of consolidation. Such provision is now being made in the Orissa Tenancy Act, but has not been made in the new Bihar Tenancy Bill, as provision could only be made by agreement between the representatives of the landlords and the tenants' parties in the circumstances in which that Bill has been framed. In view of what is stated above, no action is being taken on the recommendation made in paragraph 128 (20) of the Report of the Royal Commission.
	Central Provinces.—An Act called the Central Provinces Consolidation of Holdings Act was passed and was brought into force in 1928 ; it has been applied to the Chhattisgarh division and the work of consolidation is in progress.
	Delhi.—In the Co-operative Department some useful work has been done in the matter of consideration of holdings and the appointments of two Sub-Inspectors has recently been sanctioned as an experimental measure for this special class of work.
CHAPTER VI.—Demonstration and Propaganda.	**Ajmer-Marwara.**—The local Administration does not consider that efforts to consolidate holdings would meet with any success.
14. Review of Methods of Propaganda employed (paragraph 130).	**Bengal.**—The matter is under consideration.
	United Provinces.—No comprehensive review has so far been made ; but naturally those methods only are employed which the Director considers to give the best value for the money available for propaganda out of his very limited budget.
	Burma.—It has been decided that propaganda should be dealt with comprehensively in the annual report of the Agricultural Department.
	Bihar and Orissa.—The Provincial Development Board and the officers of the Agricultural Department at staff meetings review the various methods of propaganda employed, their relative cost and the claims of each upon the time of the staff. Any method proved ineffective is abandoned. The discussion at the meetings of the Board of Agriculture in India have also been helpful in the past. No further organisation for the purpose is needed.
	Central Provinces.—Existing methods are constantly coming under review and efforts to render propaganda work more effective and efficient will constantly be made. At present the proper training of demonstration staff in practical works and also by means of refresher courses is receiving attenton.
15. Re-examination of the policy of establishing Demonstration Farms in the Punjab and the United Provinces (paragraph 131).	**United Provinces.**—*Vide* remarks against item (16) below.
	Punjab.— *Vide* remarks against item (16) below.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
16. Establishment of Special Demonstration Farms (paragraph 131).	**Madras.**—The local Government are of opinion that the best form of domonstration is that which is conducted on the cultivator's fields. **Bengal.**—The local Government agree in principle with these recommendations, subject to the view in regard to recommendation No. 8 in paragraph 151 of the Report that the district farms in Bengal are not exclusively demonstration farms. **United Provinces.**—The matter is under consideration ; but such farms in the United Provinces are already being more and more developed into experimental and seed farms. They also serve as centres of agricultural organization and propaganda, and as a general policy, the Government are not disposed to close the existing farms though each case will be considered on its own merits. **Punjab.**—The Agricultural Department's policy of establishing farms in the Punjab was re-examined, by Government and it was decided to carry it through and not to accept the recommendation of the Royal Commission. **Burma.**—No action is necessary. **Bihar and Orissa.**—The accepted policy of Government is to establish seven large experimental farms at range headquarters and 64 small farms—one in each subdivision. There are at present five large farms and 19 small farms : of the latter, one is a small cocoanut plantation and one a cattle farm, leaving 17 subdivisional farms proper. These are primarily small experimental farms necessitated by the varying conditions of the province, secondly seed farms and only indirectly demonstration farms. As lack of funds has prevented the opening of one farm in each subdivision, the farm programme has been revised and more attention devoted to propaganda. The Director of Agriculture has accordingly been requested to submit official proposals for the provision for funds in his budget for 1930-31 for the following items :— (1) Additions to the streagth of the subordinate agricultural service so as to provide one overseer per subdivision irrespective of whether a small farm has been opened in the subdivision. The cost for this will be Rs. 27,000 recurring. (2) An addition of 30 *kamdars* every year to the existing staff to work under the new overseers. This will mean an additional recurring expenditure of Rs. 9,000 in the first year increasing gradually to Rs. 45,000 in the fifth year. **Central Provinces.**—Permanent demonstration farms and temporary demonstration plots have both been established on a fairly liberal scale.
17. Establishment of Short Courses on Demonstration and Seed Farms (paragraph 135).	**Bengal.**—The local Government agree in principle. **United Provinces.**—The Bichpuri farm in the Agra District undertakes the practical training of primary school teachers. The Nagina farm at Bijnor is doing valuable work in organizing practical courses for small cultivators. Co-operative Department supervisors received training this year at the Partabgarh farm. The system will be extended as funds become available on the basis of the experience obtained and is receiving close attention. **Burma.**—The Government have decided to give effect to this recommendation and the Director of Agriculture has been instructed to submit schemes for short courses in due course.

Subject (with paragraph of the Report)—	Action taken by the Government (or Administration).
	Bihar and Orissa.—The small farms and the range headquarters farms are used for training *kamdars* for propaganda work. Apart from the fact that there are no special demonstration farms, the training of overseers for the subordinate agricultural service as well as *kamdars* is a heavy tax on the time of Deputy Directors and a general short course cannot be attempted at present. The recommendation that short courses in particular subjects should form an important part of the work of demonstration and seed farms has been accepted in principle and if and when an agricultural college is established, the position will be reconsidered. **Central Provinces.**—Provision for giving short courses on Government farms exists in the Central Provinces and Berar.
18. Comparison of the two systems of carrying out Demonstrations on the Cultivator's own Fields (paragraph 130).	**Madras.**—The two systems were discussed by the Advisory Committee who came to the conclusion that the system under which the land is cultivated by the cultivator himself under departmental supervision was the better one for demonstration purposes. **Bengal.**—The local Government agree with the views of the Commission. As observed by the Commission, the second method is being practised in this province but the feasibility of carrying on some demonstrations under the first method is receiving consideration. **United Provinces.**—Both systems are in use in this Province. The Director believes the method of hiring a plot and carrying out demonstration by means of the departmental staff to be the best suited for the early stages of the introduction of new methods under village conditions in the province.
	Burma.—The principle has been accepted and is being followed. **Bihar and Orissa.**—The comparison of results is a minor matter, for the two methods are complementary rather than alternative. At present the Agricultural Department use only demonstrations on cultivator's plots. There is scope also for supplementary demonstrations on hired land. In areas where there are as yet no small farms, a *quasi*-permanent demonstration plot would provide a most useful centre for district work. A scheme for a "Portable demonstration farm" of this nature is being worked out for Banki in Cuttack Sadar subdivision where successful work has been done with the help of the local Central Co-operative Bank. For an area of five acres the initial cost would be Rs. 2,500. The farm would be in charge of a "Sardar" (Sub-overseer) who would live in the village. No permanent buildings would be erected. Recurring costs would be on an average of Rs. 400 per annum for each sardar and Rs. 500 for rent and contingencies. The farm should be moved on after five years. It is proposed to give a trial to this scheme in one range to start with. **Central Provinces.**—Both systems are in operation.
19. Peripatetic Demonstrations of the use of Improved Implements (paragraph 138).	**Madras.**—The question was considered by the Advisory Committee. It was stated that demonstrations of the use of improved implements are being given, but that there was not much demand for the hiring out of the more expensive implements either by the department or by manufacturers.
	Bengal.—The matter is under consideration. **United Provinces.**—This recommendation is being carried out on a gradually increasing scale. At present demonstrations are confined to the big fairs and exhibitions that take place in the various districts of the province, but action is in comtemplation to organise travelling exhibitions of this kind in definite areas.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Punjab.—This is the main system of demonstration in progress in the province and it is expanding.
	Burma.—Peripatetic demonstrations are being given and no special action is required
	Bihar and Orissa.—This recommendation is in accordance with the present policy of the Agricultural Department. A small scheme on these lines was sanctioned by Government in 1927 and given effect to from October, 1928. The scheme costs Rs. 6,360 recurring and Rs. 2,950 initial, including one agricultural inspector and two overseers and ten *kamdars*, each with a set of implements, a cart and a pair of bullocks. The schemes goes further than the recommendation of the Commission, being part of a better farming compaign. Progress will be reviewed after a year's working. Work on improved agricultural implements is still in its infancy in Bihar and Orissa and there are only a few such implements fit for demonstration. When funds are available, it is proposed to allot Rs. 5,000 a year for the demonstration of improved implements in the various ranges and to re-examine the position after five years. The Agricultural Department will limit the hiring of improved implements to special cases connected with the propaganda work and judiciously develop their sales on the instalment system, and if it can thereby create a demand for private enterprise, it will be considered whether co-operative societies for the purchase and sale of these implements can be organised.
	Central Provinces.—These are carried out on a fairly extensive scale by touring agricultural assistants. A motor lorry is also used.
20. Agricultural Shows and Agricultural Stalls (paragraph 139).	**Madras.**—Suitable action is being taken in accordance with the recommendations of the Royal Commission.
	Bengal.—The question is under consideration.
	United Provinces.—Each Agricultural Circle has now a permanent exhibit of machinery implements and produce, which is sent to as many district exhibitions and fairs as possible. These exhibits are expanded and kept up to date. Besides this the Government give grants of Rs. 100 to 250 for prizesto the show committees of approximately 25 districts. A grant of Rs. 4,000 is being given this year to the Allahabad Kumbh Mela Committee for an agricultural exhibition. This is probably the largest fair in the province. A special organisation for cattle shows is also being developed. At present a travelling exhibition of cattle and modern dairy equipment visits six of the large religious fairs each year. This proves expensive on account of transit and maintenance charges although there is no doubt that it is an extremely useful form of demonstration which it is proposed to expand.
	Punjab.—A new feature of propaganda work has been the opening of a permanent agricultural stall in the Lyallpur Mandi as an experiment.
	Burma.—The principle has been accepted. At present both district headquarters agricultural shows as well as shows at Pagoda festivals are subsidised. No regulated market exists at present.
	Bihar and Orissa.—Small grants to agricultural shows are given by Government, and the Agricultural Department arranges suitable demonstrations in certain cases. As the work of the Agricultural Department develops, these various subsidiary forms of propaganda can be developed *pari pasu* as funds and staff permit. Agricultural shows must succeed village demonstrations work and not precede it. Prizes at agricultural shows should consist of improved agricultural implements or seeds but sometimes money prizes would be more suitable, e.g., for market gardening. The recommendation for the establishment of permanent agricultural stalls in any regulated markets which may be established has been accepted in principle and will be considered in due course.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Central Provinces.—Small agricultural shows are held every year in various parts of the province. The establishment of agricultural stalls in markets will be considered when staff is available.
21. Other Forms of Propaganda (paragraph 141).	**Madras.**—The question of the production of cinema films by the Agricultural Department was considered by the Advisory Committee which was of opinion that magic lantern slides would be more useful in villages than cinema films. The Department has already begun propaganda by motor exhibition vans fitted up with magic lanterns and slides showing the various agricultural improvements.
	Bengal.—The question is under consideration.
	United Provinces.—The Agricultural Department has experimented with cinema films and not found them very useful. Unless they deal with exact local conditions, which vary considerably in different districts, the cultivator is slow to take them in, and does not appreciate the lessons taught. At present the Government are of opinion that the funds available are better spent on other forms of propaganda. A detailed proposal for a demonstration train was prepared last year in conjunction with the E. I. Railway, but had to be postponed owing to the financial situation.
	Punjab.—The demonstration train toured for 6 months and 8 days throughout the province during the past year. The Department's Cinema lorry also toured.
	Burma.—The principle has been accepted but no immediate action is required so far as production of films is concerned. Owing to the fact that in Burma railways affect only a very small proportion of the agricultural population, the Government do not consider that the use of demonstration trains would, at the present time at least, be justified. Demonstration motor buses are likely to prove more useful than trains and will be tried when the necessity for them is felt.
	Bihar and Orissa.—Production of films is an expensive form of propaganda to organise and one organisation for the whole of the rural uplift activities of Government would be preferable to sporadic departmental action. Some tentative experiments are in progress in some of the wealthier provinces and the experience gained by them will be beneficial to Bihar and Orissa. At present the province cannot provide adequate material to make demonstration trains, as organised recently in Bengal and Punjab, effective.
	Central Provinces.—A motor lorry provided with a cinema, implements for demonstration, exhibits of improved varieties of crops and plant pests has been provided. Touring officers also give lantern lectures in the villages and camp with Revenue officials.
22. Formation of Divisional Boards and Taluka Development Associations (paragraph 145).	**Madras.**—The local Agricultural Advisory Committee consider that no action is required. **Bengal.**—The matter is under consideration.
	United Provinces.—Agricultural Associations have been formed in various areas; in some cases by districts, in others by *tahsils*; bu the movement is still experimental and in its infancy. Agricultural assistants are not yet available in sufficient numbers to be spared for camp work.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Burma.—The principle is accepted. Its operation is possible only when the co-operative societies have been reinvigorated. **Bihar and Orissa.**—Divisional Development Boards have been established in this Province already but not *taluka* development associations. These Divisional Boards differ from those in Bombay, in that they are purely advisory bodies. On the other hand their constitution is wider since they include representatives of the Veterinary and Industries Departments. District Agricultural Associations, with one outstanding exception, have proved a failure and Divisional and Subdivisional Boards would equally prove failures. A Revenue *thana*, though a suitable unit in some respects, is probably too small to provide a sufficient number of enthusiastic non-officials to make a development association a success. For the present better results may be expected from the joint organisation of propaganda by the Co-operative and Agricultural Departments. Central Banks are already giving valuable assistance in this direction. **Central Provinces.**—District and *taluq* agricultural associations are already in existence.
23. Use made of Co-operative Societies in Demonstration work (paragraph 147).	**Madras.**—The local Agricultural Advisory Committee suggest that the tour programmes of agricultural demonstrators should be communicated to co-operative societies in advance to enable the latter to co-operate with the former. **Bengal.**—The question is under consideration. **United Provinces.**—Every effort is being made to maintain close touch between the Agricultural and Co-operative Departments, and to educate co-operative primary societies as much as possible. The Registrar, however, emphasises the point that these should not be used as a field for agricultural experiments of which the success is doubtful. **Punjab.**—Some more better farming co-operative societies have been started during the past year. The Co-operative Department is continuing the registration and promotion of better farming societies. **Burma.**—The principle is accepted. No special action is required. Better farming societies do not yet exist in Burma. **Bihar and Orissa.**—There are at present no better farming societies of the Punjab type in this Province. The Registrar of Co-operative Societies will take steps for the organisation of such societies in consultation with the Director of Agriculture and in close co-operation with him. **Central Provinces.**—Co-operative and agricultural officers attend joint meetings and rallies and carry on propaganda work. Officers of the Veterinary and Public Health Departments have also taken part. A scheme for financing the marketing of improved varieties of cotton through co-operative agency in Berar is under consideration. Demonstration is arranged on member's holdings.
24. Appointment of a Special Officer for the organisation and systematisation of Propaganda work (paragraph 148).	**Madras.** An officer of the grade of Deputy Director of Agriculture has been appointed for this work at a cost of Rs. 10,260 per annum. **Bombay.**—The matter is under consideration. **Bengal.**—The matter is under consideration. **United Provinces.**—No action has been taken owing to lack of funds and pressure of more urgent demands. **Punjab.**—A proposal to appoint a Propaganda Officer is under the consideration of Government.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Burma.—The Director of Agriculture has been instructed to report on the question of appointing a specialist propaganda officer with reference to other proposals of the Royal Commission for additional specialist officers. **Bihar and Orissa.**—The appointment of such an officer is considered premature. **Central Provinces.**—No such officer has yet been appointed.
CHAPTER VII.—Animal and Husbandry.	
25. Work on Sheep and Goat Breeding (paragraphs 158-159).	**Madras.**—The local Agricultural Advisory Committee do not consider that any remarks are called for on the recommendations made. Work on the lines recommended is already being done at Hosur. **Bombay.**—A comprehensive scheme for sheep-breeding has been prepared by the Agricultural Department but in view of the prevailing financial stringency it is contemplated to undertake the work on a small scale only by the importation of Australian ewes and rams. It is also proposed to stock a small number of goats on several farms and to grade them up by selection. Proposals in this regard are under consideration. **Bengal.**—Sheep and goat breeding has not yet been taken up in this Province. **United Provinces.**—No work is in progress yet, but a detailed proposal to establish two flocks of sheep has been put before the Provincial Cattle Committee and approved, and awaits the provision of funds. **Punjab.**—Steps are being taken to encourage the sheep breeding industry. During the year 1928-29, 73 cross-bred Merino rams were issued from the Government Cattle Farm, Hissar, of which 70 were sent to the Kangra District, 2 to the Rohtak District and 1 to the Gurdaspur District. The sale of 100 three-quarter bred Merino rams from the Hissar Farm to the Kangra District Board was sanctioned at a concession rate. Of this number, 70 have already been supplied. Damani rams were purchased from Dera Ismail Khan and distributed amongst flocks of local sheep to the exclusion of local rams in the "Thal" (*i.e.*, the desert part) of the Mianwali District. These are famous for milking qualities. Goat breeding is also going on in the Government Cattle Farm, Hissar, to grade up the indigenous breed by breeding from selected stock. **Burma.**—These recommendations are not considered to require the attention of the Agricultural Department at present. **Bihar and Orissa.**—The recommendations have been reserved for consideration when a whole-time Livestock Expert has been appointed. Sheep are of minor importance in most parts of the province and no demand for work on the improvement of goats has arisen so far. **Central Provinces.**—In view of the much greater importance of cattle breeding to the province, no work on sheep and goat breeding has yet been undertaken.
26. Improvement of Grazing Facilities (paragraphs 181-183).	**Madras.**—The matter is still under consideration. **Bengal.**—While appreciating the value of these recommendations Government are of opinion that conditions in this province are such that it is not possible to give effect to them except to a very limited extent.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	United Provinces.—The new Settlement Act passed during the year provides in Section 63-C., for the exclusion from assessment of all grazing grounds from which no rent is derived. The Revenue Department have under consideration the starting of some experiments in communal management of grazing grounds. There was a fodder famine in certain districts due to the failure of the monsoon and hay was imported from a distance by rail, from Government forests, and sold at cost price. The results conclusively prove that, unless scarcity conditions are extremely bad, the railing of fodder from reserved forests to plains districts is utterly impracticable. Villagers will not purchase it in preference to *bhusa*. The Agricultural Department advocates a scheme for subsidising the growing of fodder crops and thus building up a fodder reserve in precarious tracts. The Forest Officer put on special duty for the supply of hay has advocated a scheme for growth of pasture on Usar land by fencing it during the rains, and thereby preventing it being trodden down by cattle as at present. This will be investigated. The question of grazing in reserved forests is subsequently dealt with—*vide* item 36. **Punjab.**—The matter was considered at a Conference which included the Chief Conservator of Forests and the Director, Civil Veterinary Department. It was agreed that the Forest and Agricultural Departments would collaborate in drawing up a scheme for the improvement of forest grazing in the Murree Hills. **Burma.**—The methods for improving the productivity of grazing grounds are not in all cases applicable to Burma. The problem of improving the productivity of grazing grounds must be postponed in favour of more urgent problems which require the attention of the Agricultural Department. **Bihar and Orissa.**—Practically nothing can be done to improve grazing facilities in the villages, though it may be possible to help the professional graziers by improving facilities in recognised grazing areas. The question will receive the personal attention of the Livestock Officer when appointed. Broadly speaking, however, the cattle of Bihar and Orissa are stall-fed and the larger production of fodder crops is infinitely more important than the improvement of grazing. **Central Provinces.**—The matter is under consideration and special attention is being paid to the improvement of grass lands.
27. Promotion of the use of Silage (paragraph 195).	**Bengal.**—The policy recommended is being followed. **United Provinces.**—A few demonstrations with silage have been carried out in four districts. The process has been appreciated by the cultivators but has not been generally adopted. It is proposed to initiate concentrated effort in good cattle-breeding districts where there is usually insufficient grazing in the hot weather as in the Meerut, Agra and Allahabad divisions. The controlled breeding areas in these divisions are suitable tracts for starting demonstrations. Ensilage experiments made by certain better living societies were successful. **Punjab.**—In addition to the siloing of ordinary farm crops, investigations are in progress regarding the possibility of converting into silage inferior grasses and other plants now allowed to rot in some parts of the province. **Burma.**—It has been decided that the Agricultural Department should extend its experiments in regard to dry grass, hay and silage. The Director of Agriculture will mention these matters in his annual report.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—In the past, silage-making has been mainly confined to large farms. It is now proposed to carry out experiments and demonstrations on the small farms with simple silage pits and also to ascertain more exactly the value of silage made from grass and waste. Some experiments have, in fact, been started. A small bullock driven fodder-cutting outfit suitable for small farms and co-operative societies will be tried in the Chota Nagpur Range and other parts of Bihar where there are big cultivators who do not know the value of silage. The demonstrations will include the demonstration of chaff cutters. The estimated cost of propaganda by trained *kamdars* will be Rs. 3,000 a year. **Central Provinces.**—The utilization of fodder crops and rough grasses for silage-making is already being demonstrated.
28. Investigation of the correct period at which to harvest Cereals (paragraph 186).	**Madras.**—This problem will be taken up by the Nutrition Section of the Agricultural Department which it is proposed to start. **Bengal.**—The recommendation is accepted in principle. **United Provinces.**—No work on this is reported. **Burma.**—The Government consider that variation of the period of harvesting is not feasible. **Bihar and Orissa.**—The recommendation has been accepted and will receive attention. No special proposals are necessary. **Central Provinces.**—The applicability of this recommendation to agricultural conditions prevailing in the Central Provinces and Berar will be considered.
29. Encouragement of the cultivation of Leguminous Fodder Crops (paragraph 187).	**Bengal.**—The Government agree generally in principle. **United Provinces.**—Propaganda work has been started to induce cultivators to grow fodder crops on their holdings. An exhaustive note on the subject has been prepared and published broadcast in the controlled cattle-breeding areas. The Public Health Department is interested in the cultivation of clover from an anti-malarial standpoint and is making some large scale experiments, including the sowing of clover on canal banks. **Punjab.**—The concession for the supply of canal irrigation at much reduced rates has continued. Experiments have also been set up on farms in various parts of the province to ascertain in what locality berseem will ripen its seeds best. **Burma.**—The Government are of opinion that the matter is not of very great importance in Burma. Where leguminous crops can be grown best other fodders are abundant. In Lower Burma generally the leguminous fodder crops cannot be grown. **Bihar and Orissa.**—At present this recommendation is hardly applicable to Bihar and Orissa where the method of assessing canal rates differ somewhat from that in vogue in other provinces. The recommendation has, therefore, been reserved for future consideration. Special attention will continue to be given to leguminous fodder crops on the various farms of the department in those areas where a catch leguminous crop after rice is not already the custom. **Central Provinces.**—The growing of berseem (*Trifolium alexandrium*) and lucerne (*Madieago sativa*) under irrigation is demonstrated and other leguminous crops are under trial. It is doubtful if sufficient water is available to enable concession rates to be given.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
30. Progress made in establishing pure and improved types of good Cattle (including buffaloes), with special reference to the policy of producing "dual purpose cattle" (paragraphs 188-198).	**Bengal.**—The local Government agree in principle and have decided to leave its Cattle Breeding Expert to carry out his programme in the light of the observations made. **United Provinces.**—Work on cattle breeding had been proceeding along the lines approved by the Royal Commission and no alteration of policy has been necessary. A third farm is being established in the Jhansi district. At each of the Madhurikund and Manjhra farms two distinct herds are being built up :— 1. A herd bred purely on the basis of draught conformation. 2. A herd in which milk capacity is considered in connection with good draught conformation. There is thus no danger of draught qualities being overlooked in the search for milking qualities. The distribution of bulls from the dual purpose herd is limited to certain areas, namely, the tract west of the Ganges from Cawnpore northward to Muzaffarnagar and efforts are being made to locate them where milk production is of importance or likely to become so. Murrah buffaloes are bred on both farms as a dairy breed. **Punjab.**— At the Government Cattle Farm, Hissar, efforts are made to meet the ever-increasing demand for the supply of farm bred stud bulls. Standard cows, yielding over 2,000 lbs. of milk in one lactation, have been put into a separate herd with bulls of a good milking pedigree. **Burma.**—The principle and conclusions are generally acepted. No special action is required. The question of limiting the issue of breeding bulls has no practical application until the Agricultural Department has developed its breeding herds. The question of provision of dual purpose cattle has slight application in Burma owing to the small demand for dairy products. **Bihar and Orissa.**—There are at present four farms in the province under the Agricultural Department which undertake cattle-breeding, and also the cattle-breeding and dairy farm attached to the veterinary college. At the Kanke farm, a purely dairy herd is maintained which includes a number of pedigree Montgomery, some cross-bred and some miscellaneous animals. This farm can at present supply a limited number of Montgomery bulls and the herd has reached a fairly high standard of excellence from the point of view of milk production. It has recently been decided to add a herd of Thar Parkar Cattle as likely to produce bulls of more value for general distribution. The necessary funds (Rs. 10,000) have been provided in the budget for 1929-30. The Monghyr Dairy Farm was started five years ago as a dairy farm. No definite breeding policy was adopted. Some cross-breeding with a halfbred Holstein-Montgomery bull was tried ; this was unsuccessful and has been stopped. The farm has a fair number of Shahabad cows and is now being converted into a breeding farm for this important local type. A commencement was made in the purchase of Shahabad cows in 1928-29. At Sipaya, a breeding herd of Murrah buffaloes has been established. Steps have also been taken to establish a definite breeding area in North Bihar, where the demand for the bulls is keen, by intensive distribution of bulls. A special grant for the purchase of 30 Murrah bulls from the Punjab was made in 1928. A livestock inspector for the supervision of the stud bulls distribution is now being appointed.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	At Cuttack, a small herd of local cows has been established and by rational feeding a marked improvement in the milk yield has been obtained. Some experiments have been made in cross-breeding with the Montgomery breed with unexpectedly successful result so far as the first crosses are concerned but with little success so far in the next generation. Something has been done, however, in the grading up of local cows, and two local bulls have recently been obtained for use in the herd. Administrative sanction has already been given to the establishment of a cattle-breeding and dairy farm at Cuttack at a cost of Rs. 1,20,000 non-recurring and Rs. 25,740 recurring, but it has not yet been possible to allot funds. It is now proposed that the farm should be definitely a breeding farm for the local breed of cattle and not a dairy farm, the sale of milk being incidental and not the main object. Crossing involving imported sires (or their progeny) has been discontinued and attention will now be concentrated on the improvement of indigenous breeds and the improvement of working cattle. It is difficult to state to what extent specific breeds of cattle exist in Bihar. In addition to the export of cattle to Bengal, to which the Royal Commission refer, there is an undoubted import from the United Provinces as part of the general south-eastern movement of cattle. To what extent this affects the character of provincial cattle is uncertain. Apart from Orissa and the nondescript cattle of Chota Nagpur, two types are recognizable, *viz.*, the Shahabad breed—a medium sized breed of fair milking capacity and producing useful working bullocks and the North Bihar breeds which spend most of the year in Nepal, spoken of as the Sitamarhi, Bachaur, Purnea and Morang—small active plough cattle of no merit as milkers. It is proposed to study the relation of the Shahabad breed to the United Provinces Kosi-Mewati and of the North Bihar breeds to the United Provinces Khairigarh and Ponwar breeds. For the improvement of the local breeds, it may be necessary to start farms for North-West Bihar, North-East Bihar and Shahabad. The cost of each will be Rs. 2 lakhs non-recurring and Rs. 25,000 recurring. Hence to give effect to the recommendation fully seven lakhs non-recurring expenditure and one lakh recurring expenditure are required. But Government do not propose to incur this expenditure until a Livestock Officer and staff whose appointments have been approved, are actually appointed. In the meantime, stock will be purchased for the Kanke and Monghyr farms according to necessity (Rs. 10,000 to Rs. 15,000 a year) but this will not be given precedence over the appointment of the Livestock Officer. The recommendation for issuing breeding bulls to selected districts and regularly inspecting the stock in all districts to which bulls are supplied has been accepted. The cost will be Rs. 14,000 per annum but will not exceed Rs. 5,000 a year in the early years. **Central Provinces.**—Three pure bred herds of draught cattle are now maintained and one herd of milch cattle. Two central cattle-breeding farms for grading have recently been opened and these have sub-depots from which young bulls will eventually be supplied. An experimental herd for producing dual purpose animals also exists. No buffalo herd has yet been started but the matter is under consideration.
81. Improvement of the Urban Milk and Ghee supply (paragraphs 199-201).	**Madras.**—In Madras a union of co-operative milk supply societies has been formed for the supply of pure and unadulterated milk to the residents of the city. The Government have sanctioned a loan of Rs. 15,000 to the union for the purchase of two motor lorries and a cream separator. The question of giving further financial assistance for the erection of a pasteurising plant is under consideration.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bengal.—The local Government agree in principle, but in the absence of a Minister are unable to take up the question of amendment of the Bengal Municipal Act to deal with the recommendation, *re* supply of pure milk to urban consumers. The Co-operative Department is, however, investigating the question of milk supply in municipalities. As regards protection against vegetable *ghee* the local Government are inclined to adopt the suggestion that this article should be described with an entirely distinct name and trade mark, etc., so as to distinguish it from pure *ghee*. **United Provinces.**—The matter is receiving close attention from the Agricultural and the Public Health Departments. One of the main difficulties is the extent to which the sale of pure milk is handicapped in competition with adulterated milk sold at lower rates. Milk is supplied from the two cattle farms to the towns of Muttra and Lakhimpur, and from private schemes under the auspices of the Departments at Agra, Lalkua, Hathras, Etawah and Jhansi. Further attempts to start such schemes at Saharanpur and Lucknow have not yet succeeded. A tendency among *ghee* consumers to take butter in its place has been noted. **Burma.**—The principles laid down by the Royal Commission in regard to the essentials for a successful scheme of urban milk supply are accepted, but it is considered that no action is required at present. **Bihar and Orissa.**—The recommendations are now under consideration. **Central Provinces.**—One co-operative dairy has been organized to meet the needs of a large city but large cities in the Central Provinces and Berar are very few in number. Legislation for the prevention of adulteration of milk and butter already exists.
32. Organisation of Co-operative Breeding Societies (paragraph 202).	**Bombay.**—The question of the encouragement of the organisation of such societies by the loan or gift of good bulls and by the provision of grazing grounds is under consideration. **Bengal.**—The policy recommended is being followed. **United Provinces.**—No action is reported yet. **Punjab.**—A certain number of co-operative cattle-breeding societies still exist, but are not of much use so far. **Burma.**—This will apply when the Agricultural Department has created its breeding herds. **Bihar and Orissa.**—The recommendation has been accepted in principle. The formation of such societies at present would be premature as it is not possible to supply suitable bulls. **Central Provinces.**—Several have been started from time to time but on the whole have not proved successful, but the question of the formation of such societies is being investigated by the Berar Co-operative Institute. Bulls on the premium system have been maintained.
33. Livestock Shows and Fairs (paragraph 203).	**Madras.**—The revival of the cattle fair at Ongole has been recommended by the local Agricultural Advisory Committee which has also suggested that the question of reviving cattle shows may be considered when there is a local demand **Bengal.**—The policy recommended is being followed. **United Provinces.**—*Cf.* remarks against item 20 above. Special attention is given to cattle shows in the controlled breeding areas and good prize money given. This year, however, these areas were among those threatened with scarcity and fodder famine, and so shows were not held on the same scale.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Punjab.—The holding of livestock shows and fairs in the various districts of the Punjab is being encouraged, prizes being given with special regard to the classes for cows, calves, yearling cattle and bullocks. **Burma.**—The principle is accepted and is being practised. **Bihar and Orissa.**—The recommendation has been accepted in principle. No special action is called for at present. **Central Provinces.**—Cattle shows and fairs are already held, most frequently, as a section of a general agricultural exhibition.
34. Castration (paragraph 207).	**Madras.**—No action was considered necessary by the Agricultural Advisory Committee. **Bengal.**—The policy recommended is being followed. **United Provinces.**—No special progress is reported. **Punjab.**—330,889 castrations were performed during the year 1928-29. **Burma.**—The recommendation has been accepted. **Bihar and Orissa.**—The recommendation has been accepted. Elimination of scrub bulls is absolutely necessary for the general improvement of cattle. **Central Provinces.**—The need for early castration is recognised, but at present many difficulties prevent the wider adoption of the practice.
35. Control of Livestock improvement (paragraph 208).	**Madras.**—This work is at present under the control of the Agricultural Department and a whole-time officer—Deputy Director of Agriculture, Livestock—is in charge of it. Both the Agricultural Advisory Committee and the local Government consider that the existing arrangement needs no change for the present. **Bengal.**—The local Government agree with the recommendation and the policy underlying is being followed. **United Provinces.**—The Royal Commission approved what was the existing practice in this province. **Punjab.**—The livestock improvement of the Province has been placed under the control of the Livestock Officer to Government, Punjab, at Ferozepore. **Burma.**—The principle has been accepted. The question of appointing whole-time officers in charge of livestock improvement is under consideration. **Bihar and Orissa.**—The proposal for the appointment of a Livestock Officer and staff has been accepted. The cost of three officers and staff will be Rs. 40,000 a year. **Central Provinces.**—This is under the Agricultural Department and a whole-time officer is employed. **Assam.**—A Livestock and Dairy Expert has been appointed.
CHAPTER VIII.—Forests.	**Bengal.**—The recommendations in this chapter are still under consideration.
36. Grazing in Forest areas and Fodder supplies from those areas (paragraphs 218-219).	**United Provinces.**—(*i*) The encouragement of grass-cutting as an alternative to grazing has a double object :— (*a*) To benefit the forests. (*b*) To benefit the cattle.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	As regards (*a*), with the exception of Kumaon Circle, the valuable forests are, generally speaking, adequately protected by closures to grazing. Any considerable extension of closures would be a hardship and would probably result in the starvation of cattle rather than in forcing the people to cut grass, because they have not the time to give to such work and if they had the time, the cattle are mostly not worth it. To cut grass at Government expense for them on a large scale would be very expensive and it is quite impossible even to suggest a figure. Generalisations are really not possible because the conditions are different everywhere but it may be stated that over very large areas, grass cutting is not, at present, a practicable alternative at all. The main grazing grounds of the Tarai contain only coarse grasses from which hay cannot be made—the cattle graze on the fresh green shoots of these grasses after they are burnt. Such grass cannot be cut economically. A possible way of extending stall feeding would be to create grass farms out of the coarse grass lands of the plains. The Forest Department can experiment in this direction at a small cost—in fact experiments in improving the quality of the grasses are already in hand. A demand for cut fodder would, however, have to precede the creation of such farms on a bigger scale. It has been already proposed to put an officer on special duty to study grasses and this will be done when a suitable officer is available. As regards (*b*), the cattle would benefit mainly where the grazing is in tree forest which contains little grass. Fodder grasses would have to be cut from more distant hill forests and the difficulties noted above would apply. The Gonda Division is experimenting with a partial restriction of grazing in favour of grass cutting. In the Kumaon Circle, taking cattle to the forest daily and home again is not possible in the case of a large number of villages and stall feeding is much practised. Some forests are certainly overgrazed and an extension of stall feeding is most desirable. The Forest Department has long been engaged in encouraging it by making forest reserves, as far as the funds of Kumaon Circle and the difficulties of Kumaon forest policy permit. No new schemes requiring special estimate are under consideration. The proposed communal forests will no doubt be largely concerned with the provision of fodder-reserve (*cf.* also item 26 above). (*ii*) Discouraging the grazing of inferior cattle. A suggestion made at the all-India Silvicultural Conference to put a prohibitive grazing fee on entire bulls to discourage promiscuous breeding is being considered. Popular opinion is most strongly against any interference with existing habits because it means more labour. (*iii*) The Forest Department is experimenting in several places with improving the quality of grasses. Success demands (*a*) closures, (*b*) considerable expense. (One officer says Rs. 10 per acre.) The results so far are not very encouraging. (*iv*) Railway freights and fodder supplies.—Extract from a note by Mr. E. A. Smythies, Officer-in-charge of fodder famine operations, 1928-29 :— "On the other hand, whenever there is sufficient grazing, grass cutting in areas closed to grazing is *never* resorted to, and never will be owing to the increased labour involved (*e.g.*, Jhansi and Banda Divisions).

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	"The recent famine fodder operations have proved *conclusively* that the railing of fodder from reserved forests to the plains districts is utterly impracticable except in periods of severe scarcity. In April this year although hay was being supplied to villagers *at less than the cost of delivery on rail*, immediately the new harvest brought *bhusa* on the market, our hay became practically unsaleable. The same will apply to grass areas not under the Forest Department. With protection, these will supply fodder for local consumption but never for distant areas (except possibly for sale in large towns). It may be taken as an axiom that the poorer agricultural population will not pay the cost of cutting and baling hay (let alone railing) in normal years, but will in many plains districts be glad to cut and remove hay or fodder for their own use from any areas in their vicinity. Hence the question of railway freights is beside the point." **Punjab.**—Subject to the observance of the recorded rights in grazing, the existing policy of the Forest Department is to encourage grass cutting as an alternative to grazing. The recommendation regarding the discouraging of grazing of inferior cattle in the forests is not feasible in practice, where all the cattle of a village have grazing rights in a forest. As regards intensity of grazing, the results of a series of experiments made some years ago were inconclusive. The question of the possibility of rotational closures in selected forests with a view to improving pasture will be referred to the local Forest Advisory Committees for consideration as soon as they are established. The question of fodder supplies from forest areas is under consideration. As regards transport of fodder, there is no grass surplus anywhere in the Punjab for export elsewhere, except in some parts of the high hills whence the cost of carriage would be prohibitive. No action is contemplated. **Burma.**—Owing to the difficulty of excluding cattle from forests, the local Government are of opinion that it is impracticable to exercise an effective discouragement of inferior cattle in respect of grazing in the forests. As it is impracticable to control the grazing of cattle in the forests without fencing, which is too costly, it is not proposed to undertake any inquiry into the intensity of grazing consistent with proper forest development and preservation of desirable grasses in each forest area. The question of fodder supplies from forest areas and their transport by railway is not applicable to conditions in Burma where there is little transport of fodder by rail except for ponies in Rangoon. **Bihar and Orissa.**—The fees for grass cutting in reserved forests are already as low as they can be made and in the protected forests the cutting of grass is generally free. Distance is also the governing factor. No action on this recommendation is, therefore, possible. Government consider that the recommendation for the discouragement of the grazing of inferior cattle in the forests is impracticable for reasons which the Commission itself has admitted. They, therefore, do not propose to take any action. Investigation regarding the intensity of grazing consistent with the proper development of the forest and the preservation of desirable grasses is unnecessary in this province. The reserved forests are mostly far away from the areas of close cultivation and the Conservator of Forests is of opinion that the demand for grazing is not heavy, is well within the capacity of the forests and is unlikely to increase in the near future. The problem contemplated by the Commission has not arisen and the local Government, therefore, do not propose to take action.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Owing to the situation of the Government reserved forests at a long distance from the areas of close cultivation and to the unfavourable layout of the railway communications, the export of fodder from the forests is generally impracticable in Bihar and Orissa. The Government have decided that the investigation proposed by the Commission into the possibilities of fodder export would serve no useful purpose. **Central Provinces.**—Grazing settlements are in existence and very large areas are available in Government forests for the grazing of cattle. No attempt is made to store hay.
37. Investigation into cost and efficiency of Wood and Charcoal relative to that of Coal (paragraphs 220-221).	**Madras.**—The local Agricultural Advisory Committee have recommended that :— (*a*) concessions may be given to villagers to encourage the raising of fuel plantations near villages, the fuel being taken by the villagers who grow the trees ; (*b*) the growth of trees on *poramboke* (village common land) lands may also be encouraged though conditions would have to be laid down carefully to prevent the monopolising of *porambokes* by rich people, and (*c*) trees may be permitted to be grown in tank beds. **United Provinces.**—No action has been taken as regards research into comparative values. The canal plantations on the Cawnpore branch of the Ganges Canal have recently been handed over to the management of the Forest Department (Afforestation Division) and offer a field for experiment in afforestation for fuel supplies. Several such schemes have been prepared, but in the opinion of the Forest Department can only be certain of paying if in the neighbourhood of large cities. The Afforestation Division now possesses a good deal of knowledge about what works of this nature would certainly not pay. On the cow-dung question, the Chief Conservator's opinion is that the Royal Commission have made too much of difficulties due to custom and too little of those due to poverty. Low railway freights to towns for wood and charcoal will have some effect in reducing the consumption of cow-dung for fuel, but low rates for the sale of these articles direct to villagers will have none, because they cannot afford to pay the cost in any circumstances. The Forest Department did obtain some reductions of fuel rates during the year, but bulky goods of very low value will not bear the cost of transport by rail over long leads. **Punjab.**—Preliminary investigations have been made into the cost and efficiency of "cow-dung", "coal" and "charcoal". Results seem to indicate that cow-dung is the most economical material to use as fuel. Further investigations should be carried out at the Forest Research Institute, Dehra Dun, which is equipped for such work and has, it is believed, already on record a good deal of information on this subject. Irrigated plantations have been or are being formed in all the canal colonies in the Punjab. The question of forming additional plantations will be considered if any further colonization projects are taken up. **Burma.**—The Government are aware of the importance of the problem and Rule 28 of the rules under the Burma Forest Act provides means for dealing with it. The cost of production of fuel from plantations would be so high in the opinion of the local Government, that it would not be justifiable to establish such plantations and no so-called stringency in the demand for fuel is at present known of. No action is therefore called for from the Forest Department.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—The local Government have decided that the investigation proposed would not be profitable. Owing to the geographical situation of the coal-field and the forests, serious competition between the two is largely precluded. They will generally have their own defined areas of supply. In any case, the layout of the railways renders the supply of fuel from the forests to the agricultural areas in competition with any other fuel an economic impossibility. The local Government have undertaken a programme for the improvement of forest extraction roads, in order to facilitate cheap extraction and the creation of local markets for fuel and small timber. Beyond this they do not propose to take action. Enquiry into the economic possibilities of afforestation for fuel supplies is financially impossible in a permanently settled Province, as the Government do not own the land and the cost of acquisition would be prohibitive. The local Government, however, are making a limited enquiry into the possibility of improving the afforestation of the side lands on the irrigation canal systems. **Central Provinces.**—No investigation has been undertaken so far.
38. Initiation of new and development of existing Forest Industries (paragraph 224).	**Madras.**—The Agricultural Advisory Committee consider that no remarks are called for. **United Provinces.**—Considerable work has been done in the past through the Utilisation Division, as for example, the development of the resin and turpentine industry. No special progress during the the year is reported. **Punjab.**—A very flourishing resin industry has been built up in the Punjab which gives part-time employment to a considerable number of agriculturists in Rawalpindi, Kangra and Hoshiarpur districts. It has been developed practically to the limit of the available resources. In other respects the Punjab is badly off for minor forest products, and in the matter of timber trees its flora is distinctly poor. **Burma.**—The opinion of the Royal Commission is accepted. No action is necessary or required. **Bihar and Orissa.**—The development of forest industries is already carefully studied by the Provincial Research Division of the Forest Department and much spade work has been done. The local Government accept the principle of the recommendation for the development of forest industries but consider that all that can profitably be done in this direction is already being done. The Provincial Research Officer performs the function of Forest Utilisation Officer. In view of the amount of work to be done, the local Government do not consider the appointment of a separate Utilisation Officer justified. **Central Provinces.**—A Forest Utilisation Officer has been appointed. He is engaged in finding markets for the exploitable surplus of timber outside the Central Provinces. The propagation of lac has been extended.
39. Disafforestation of Forest Lands required for construction of Small Irrigation Works (paragraph 225)	**Madras.**—The Agricultural Advisory Committee consider that no remarks are called for. **United Provinces.**—No case is known in this Province where any contrary policy was ever even suggested. **Punjab.**—This does not apply to the Punjab. **Burma.**—A general disafforestation of a locality on account of a small irrigation work is deprecated. Rule 10 of the Rules under the Burma Forest Act provides for permission being given to cultivators to take irrigation channels through a reserved forest. The construction of small works would not be opposed by the Forest Department.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—The recommendation is accepted in principle. There has never been any difficulty in releasing land for protection work. **Central Provinces.**—No difficulty has arisen in the Central Provinces.
40. Control of Shifting Cultivation (paragraph 228).	**Madras.**—The Agricultural Advisory Committee consider that no remarks are called for. **United Provinces.**—This is under control in the United Provinces. **Punjab.**—This is not applicable to the Punjab now. The old hill custom of "*korali*" cultivation is fast dying out. **Burma.**—This problem has had the attention of the Government for many years. The Director of Agriculture has proposed to open a Ninth Agricultural Circle to deal with this problem among others in Northern Burma and that matter is now under consideration. **Bihar and Orissa.**—Shifting cultivation exists only on a very small scale and no further measures to control it are necessary or possible. **Central Provinces.**—Shifting cultivation is under proper control.
41. Classification of Forest areas (paragraph 229).	**Madras.**—The Agricultural Advisory Committee consider that no remarks are called for. **United Provinces.**—The recommendations of the Commission appear to be based on conditions in Madras where apparently the Forest Department has or had charge of large areas of inferior forest chiefly used as grazing grounds. Such is not the case in the United Provinces and the real connection between forestry and agriculture in the United Provinces as a whole lies in what the Afforestation Division can do to demonstrate the possibilites of a better use of waste lands and inferior forest lands not belonging to Government. That demonstration will include the fundamental fact which is not recognised at all to-day, that forestry whether for timber or fuel is not an industry which can be run with success if the claims of pasturage over the same ground are given priority. For the purpose of the afforestation, a classification of the waste land throughout the Province into *usar*, *bhur*, ravines, *kadir*, etc., each of which has a different value for grazing and forestry, is needed. **Punjab.**—There is no room for any such reclassification in the Punjab. Practically all the plains forests have already been handed over for cultivation. and the question of the remainder is under consideration. The remaining forests in charge of the Forest Department are protective and commercial forests in the hills and low hills must be preserved. **Burma.**—The examination of forest areas in accordance with this recommendation is a process which is constantly going on in Burma. **Bihar and Orissa.**—The local Government do not consider any general reclassification of forest areas necessary, as the present division of their forests into reserved and protected forests has been made on principles which follow very closely the classification recommended by the Commission. There are two areas in which some alteration of the classification might be possible, namely, the Sambalpur and the Palamau forests, and this matter will be investigated by the Conservator of Forests. **Central Provinces.**—This matter will come under the consideration of the Forest Enquiry Committee.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
42. Establishment of Village Forests (paragraph 230).	**Madras.**—The Agricultural Advisory Committee consider that no remarks are called for. **United Provinces.**—Village (or communal) forests are put forward as a solution of the forest problem in Kumaon, and the Government's orders are about to be issued. So far, no demand for them has arisen elsewhere, and conditions in the small and valuable forests of these Provinces are considered by the Forest Department to be generally unsuited to this policy. **Punjab.**—Experiments in this direction have been a dismal failure, and it is not desirable to disafforest any of the protective and commercial forests now under the control of the Forest Department and to make them over to village management. **Burma.**—This problem has been very fully considered by Government. Village waste rules are contained in the Burma Land Revenue Manual. No special further action is required. **Bihar and Orissa.**—The question of handing over forests to village *panchayats* for management was considered by the local Government in detail in 1926 and was found definitely unsuitable for the conditions existing in this Province. The local Government, on further examination, adhere to their opinion and do not propose to take any action on this recommendation. **Central Provinces.**—This matter will come under the consideration of the Forest Enquiry Committee.
43. Creation of Minor Forest Divisions (paragraphs 231-232).	**Madras.**—The Agricultural Advisory Committee consider that no remarks are called for. **United Provinces.**—The Afforestation Division is devoting much attention to the development of minor forests and the encouragement of zamindars in afforestation. **Punjab.**—This does not apply to the Punjab. **Burma.**—*Vide* remarks against item 42. **Bihar and Orissa.**—In view of the existing classification of forests, the local Government do not consider it necessary to create any special agency for the management of minor forests. Minor forests are already mostly in separate divisions. In any case, the province could not afford any duplication of staff. **Central Provinces.**—This matter will come under the consideration of the Forest Enquiry Committee.
44. Institution of Short Courses in Agriculture for newly recruited Forest Officers (paragraph 233).	**Madras.**—This is not considered necessary by the Agricultural Advisory Committee. **United Provinces.**—No action has yet been taken. **Punjab.**—Arrangements have been made with the Forest Department that selected Forest Officers will attend the annual Rural Economy Course at Lyallpur and a Forest Officer will also be deputed to give some lectures in foresting. **Burma.**—Neither the Chief Conservator of Forests nor the Director of Agriculture is in favour of a short course and it is not considered necessary to take up the question at present. **Bihar and Orissa.**—The local Government accept the recommendation in principle but there is no Agricultural College in this Province to which Forest Officers can be sent. The Conservator of Forests has been asked to estimate the cost in consultation with the Director of Agriculture. **Central Provinces.**—No action has yet been taken.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
CHAPTER IX.—Diseases of Livestock and their control.	
45. Adoption of Serum-simultaneous method of Inoculation against Rinderpest (paragraphs 237-244).	**Madras.**—Inoculation by the serum-alone method is compulsory only in places where the Cattle Diseases Act is in force, and it is free. In other areas, the serum-alone method has been replaced by the serum-simultaneous method and inoculations by this method are free, though not compulsory. The question of legislation to make the serum-simultaneous method compulsory in place of the serum-alone method in large cities is under consideration (*vide* also item 46). **Bombay.**—The question is under consideration. **Bengal.**—The policy involved is being generally followed. It has been decided to supply serum free of charge to local bodies in this province. **United Provinces.**—The serum-simultaneous method has been tried during the year on a small scale on one of the Government Cattle farms with successful results so far. Further experiment will be continued, but the qualified staff of the department is so small that it can only be done at times when they can be spared from other work. **Punjab.**—Work has commenced this year, but as yet sufficient time has not elapsed to enable a report being given thereon. **Burma.**—These opinions regarding serum-simultaneous inoculation are accepted subject to the reservation that compulsory inoculation should be kept in view as the ultimate aim. The Agricultural Department is dealing with the problem of introducing serum-simultaneous inoculation. The recommendation regarding free inoculation is accepted; but the matter will be reconsidered when the system of serum-simultaneous inoculation is established. **Bihar and Orissa.**—The condition in Bihar and Orissa are not favourable for the undertaking of this method of inoculation on a wide scale. It has, however, been adopted with satisfactory results on cattle farms and will be introduced gradually in limited areas for protecting the more valuable cattle. The inoculation is done free except that the price of serum is recovered from local bodies or private estates concerned. **Central Provinces.**—The method will be adopted on a small scale to begin with and extended gradually.
46. Compulsory Inoculation (paragraph 244).	**Madras.**—The Agricultural Advisory Committee was generally in favour of legislation to make inoculation against rinderpest by the serum-simultaneous method compulsory in the case of animals kept by milk-sellers in large cities, but observed that the question of the supply of serum and of the support the Legislative Council may give to the proposal for compulsory legislation had to be considered. **Bengal.**—The local Government agree in principle. **United Provinces.**—No attempt has been made to introduce compulsory inoculation. The Public Health Department are, however, pressing for its introduction in municipal areas. **Burma.**—The Director of Agriculture has been asked to report after consultation with the large municipalities. **Bihar and Orissa.**—This pre-supposes legal measures such as bye-laws passed by local bodies. In Bihar and Orissa, the cattle of the milk-sellers are not registered by any municipality. The question of taking measures for the control of milk supply in municipal areas is now under the consideration of Government. **Central Provinces.**—The question is under consideration.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
47. Increased provision of veterinary hospitals and dispensaries (paragraph 248).	**Madras.**—Except in the case of six districts, properly equipped hospitals have been provided at the headquarters of the districts. Of these six, action is being taken to convert the dispensaries in five of them into hospitals at a cost of Rs. 79,300. At least six dispensaries are opened in the province every year, the ultimate goal being one for each *taluk*. The cost is Rs. 12,708 non-recurring and Rs. 5,700 recurring per annum. Three touring veterinary assistants were sanctioned during 1929-30 at a cost of Rs. 6,404 per annum. **Bengal.**—The question is under consideration. **United Provinces.**—Five new dispensaries were opened within the year with the aid of grants made to district boards for their construction. There is at present a difficulty in obtaining trained subordinate veterinary staff and it has not been possible to increase the staff of existing dispensaries. Thirteen men are being sent for training this year to the Bengal Veterinary College. **Punjab.**—There were 241 veterinary hospitals in the Punjab last year and an increase of 17 more, making a total of 258, has been effected this year. **Burma.**—The recommendation is accepted. The Director of Agriculture has been asked to submit a proposal. **Bihar and Orissa.**—The existing scheme provides for one veterinary hospital and two or more (if funds permit) touring veterinary assistant surgeons at district and subdivisional headquarters. The touring veterinary assistant surgeons, though their main duties are in the *mufassal*, have each a separate dispensary for treating outdoor patients brought to them. The ultimate sanctioned strength is 189 against the present number of 119 veterinary assistant surgeons. The recommendation is accepted and effect will be given to it as funds permit. **Central Provinces.**—The matter is under consideration.
48. Reorganisation of Provincial Veterinary Departments (paragraphs 249-254).	**Madras.**—This will be gradually taken up. The chief veterinary officer has been styled "Director of Veterinary Services". The number of district veterinary officers was raised from 7 to 12 from 1st April 1929 at a cost of Rs. 2,500 non-recurring and an annual recurring expenditure of Rs. 37,300. The number of veterinary dispensaries and assistant surgeons was also slightly increased. **Bombay.**—The questions of (1) the creation of a veterinary directorate for the Presidency, (2) the appointment of veterinary surgeons of the Provincial Service, and (3) increase in the number of veterinary dispensaries and the consequent increase in the number of veterinary assistant surgeons are under consideration. **Bengal.**—The question is under consideration. **United Provinces.**—The chief veterinary officer is now styled "Director of Veterinary Services" (*vide* also item No. 50 below). **Punjab.**—Effect has been given to the recommendations of the Royal Commission. The chief veterinary officer of the Punjab is now styled "Director, Civil Veterinary Department, Punjab". The Civil Veterinary Department, Punjab, is now an independent department. The position of the Principal, Punjab Veterinary College, Lahore, in relation to the Director, Civil Veterinary Department, is the same as that of the Principal, Punjab Agricultural College to the Director of Agriculture. **Burma.**—The local Government have issued the Burma Veterinary Service, Class I, rule. The framing of the Burma Veterinary Service, Class II, rules, and proposals for the reorganisation of the staff are under consideration.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—The province is divided, for veterinary purposes, into three administrative circles, called ranges, each of which will be in charge of a member of the Superior Provincial Veterinary Service, when created. The question of the scale of pay of this service and that of the Director is now under consideration. Government do not propose to take up at present the question of passing Public Services Act regarding the recruitment, discipline and conditions of this service. The control of measures for treating and preventing the spread of contagious diseases is regarded as the concern of the local Government ; the duty of providing a local veterinary service for treating diseases not scheduled as contagious and for dealing with operations and wounds, rests with local bodies with a few exceptions. The number of fully qualified veterinary surgeons available is very small. The grade of veterinary inspectors will, therefore, remain as it is. Government agree that progress in the direction of transferring greater responsibility to local bodies in veterinary matters can only be made gradually. At present local bodies are consulted in regard to appointments, transfers, promotions, punishments and dismissal of veterinary assistant surgeons. Government accept the recommendation that private effort should be encouraged in every possible way to supplement the efforts of Government and of local bodies to provide veterinary aid. But this will remain a pious hope for some time to come. **Central Provinces.**—The matter is under consideration. **North-West Frontier Province.**—Up till December 1927 the province had no gazetted officer of its own : it shared the Superintendent of the neighbouring Punjab circle and was dependent entirely on the Punjab for research and experiment work. The appointment of a separate Superintendent has now been sanctioned and every effort is being made to extend the activities of the department according to the resources of the Province.
49. Separation of Agricultural and Veterinary Departments in the Punjab (paragraph 251).	**Punjab.**—The separation of the Agricultural and Veterinary Departments has been effected with effect from 4th July 1928.
50. Training of Veterinary Surgeons and Veterinary Assistant Surgeons (paragraphs 255-258).	**Madras.**—The course of training at the Madras veterinary college for veterinary assistant surgeons already extends to three years. The question of revising the curriculum is under consideration. **Bombay.**—The framing of a suitable curriculum for the training of veterinary assistant surgeons is under consideration. **Bengal.**—The local Government agree with the recommendation that two entirely distinct courses of study are required for the training of veterinary surgeons and assistant surgeons, respectively, and are awaiting a reference from the Government of India on the recommendation made in paragraph 265 (42) regarding settling by conference the course of study for veterinary surgeons. The question of framing a suitable curriculum and course of study for veterinary assistant surgeons are under consideration.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	United Provinces.—Lack of funds and trained staff stand in the way of a reorganisation of the Veterinary Department. There are at present four scholars under training in England and two more are being sent this year. With these and the present three deputy superintendents and by training selected men from among the inspectors and veterinary assistant surgeons by short courses at veterinary colleges in India, it is hoped to build up the nucleus of a corps of district veterinary officers, which will be expanded when training on the lines advised by the Royal Commission is made available in India. In regard to veterinary assistant surgeons, progress is handicapped by the fact that there is no veterinary college in the Province, while the rates of pay of the service are less attractive than those in neighbouring provinces. As soon as the new veterinary college at Patna opens it is hoped to arrange for the training of a large number of men for this province there. An increase in pay will also be considered when funds permit. At present district boards contribute to the pay of their veterinary surgeons but in their present financial position, it is probable that the Government will have to meet the entire cost of any increase in pay and also of any expansion in numbers. **Punjab.**—The training of veterinary assistant surgeons is being conducted at the Lahore veterinary college where a four years' course of study is provided. **Burma.**—The Director of Agriculture has been asked to report on the desirability of distinct courses of study for veterinary surgeons and assistant surgeons, respectively. The curriculum for veterinary assistant surgeons has been examined and passed by expert officers of the Agricultural Department. The opinion of the Royal Commission regarding the period, etc., of the course for veterinary assistant surgeons is accepted. The Director of Agriculture has been asked to report regarding the course of study, etc., for veterinary surgeons, and the proposal for the establishment of an All-India veterinary college. **Bihar and Orissa.**—The Government have decided to establish a veterinary college at Patna where a post-graduate course of veterinary assistant surgeons already in Government service will be introduced. The buildings have already been put up and the staff is being recruited. The recommendation for the preparation of a suitable curriculum in consultation with a body of experts has been accepted in principle and will be given effect to in due course. **Central Provinces.**—It is proposed to send two scholars to England for the M.R.C.V.S. course during the current year. 22 scholarships are being awarded annually for three years for the training of candidates at the Bombay veterinary college.
51. Research work in Provincial Veterinary Colleges (paragraph 261).	**Bombay.**—The question of the provision of a well-equipped laboratory at the Bombay veterinary college is under consideration. **Bengal.**—The local Government agree in principle. **United Provinces.**—There is no veterinary college in the Province. A scheme for one was prepared some years ago but there is no prospect of funds being available for it in the near future. Some minor research work is done at the circle laboratories at Lucknow and Agra ; while the Director and Superintendents keep in touch with the Muktesar Institute, which is situated within the province. **Burma.**—Owing to lack of space and accommodation at the existing veterinary school, the Director of Agriculture is not disposed to accept this recommendation without further enquiry. This he has been asked to make and to submit a report to Government.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—The Professor of Pathology and Bacteriology for the Bihar and Orissa veterinary college will act as a research officer in addition to his own duties. Other senior officers will also be expected and encouraged to undertake investigations in their own special spheres. **Central Provinces.**—No college exists in this Province, but the establishment of an Institute is under consideration to accommodate a research branch.
CHAPTER X.—Irrigation. 52. Review of position in regard to outstanding Irrigation Projects (paragraph 275).	**United Provinces.**—There are several projects in these provinces that have been surveyed from time to time and for one reason or the other abandoned or kept pending, such as :— (1) Rapti and Gandak canal projects in the Gorakhpur District. (2) Nindeh reservoir in the Mirzapur district. (3) Kaprar weir project in the Jhansi district. (4) Paisuni Canal project in the Banda district. (5) Urmal Canal project, Dhasan Canal Division. (6) Ohan Canal project, Dhasan Canal Division. (7) Belan Canal project, Mirzapur. (8) Allahabad Branch Extension. Other projects that are under investigation at present are :— (9) Bewar Branch Extension. (10) Anti minor Extension. (11) Irrigation of tract between the Jumna and Chambal rivers. (12) Gangan river project in the Moradabad district. It is hoped, when staff becomes available with the closing down of the Sarda Canal Construction, to look into these projects once more and also to investigate the possibility of tapping the smaller rivers and streams for irrigation. **Burma.**—This is being done. **Bihar and Orissa.**—The recommendation has been accepted for immediate action. No expenditure is involved. **Central Provinces.**—The work of the Irrigation Department has just been reviewed by a Committee. Until cultivators in the areas commanded by irrigation works show by results that they appreciate the advantages of irrigation and pay for them, no new irrigation projects are likely to be undertaken. **North-West Frontier Province.**—A small staff has been operating since 1927 over the Dera Ismail Khan, Bannu, Kohat and Peshawar Districts. It is too early yet to say anything definite as regards the possibilities, but four large and two small irrigation schemes are under investigation as below :— Three large control and/or storage schemes in Dera Ismail Khan and Waziristan, one large control scheme in Kohat, one small scheme of improvement in existing methods in Bannu and one small scheme of improvement in existing methods in Peshawar.
53. Investigation and experiment on Sale of Water by volume (paragraph 277).	**United Provinces.**—The question was not investigated owing to pressure of other work, but the Research Officer, Irrigation Branch, is to take it up next cold weather. **Burma.**—Meters on flumes are being experimented with by the Irrigation Department on the Ye-u Canal. No further action is required on this at present. **Bihar and Orissa.**—Investigation and experiment will continue on the possibilities of sale of water by volume at the village outlet so as to obviate departmental interference and harassment by minor officials during irrigation of the village lands.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	In the long-term lease system, Government are approaching this desideratum, for a definite area below the outlet pays water rate, whether cultivated or not, and even if not irrigated, so that field measurement work is reduced to a minimum. The outlets certainly need improvement and a start is being made on evolving a suitable type of module outlet to replace the existing unsatisfactory pipe outlets. In this province, the capacity of the outlet is proportional to the irrigable area under it and is not reduced when its working duty is improved. The recommendations, which do not involve expenditure, have been accepted for immediate action.
	Central Provinces.—Under existing conditions, the sale of water by volume from Government works for the irrigation of rice, the only irrigated crop in the Province, is impracticable at present.
	North-West Frontier Province.—The time has not yet arrived for this in the North-West Frontier Province.
54. Formation of Irrigation *Panchayats* (paragraph 278).	**United Provinces.**—The question of associating village *panchayats* with canal management was under consideration from 1920 to 1925, but no decision was arrived at. It is in any case doubtful whether any control of the distribution of canal water can be entrusted to outside agencies not possessing the requisite technical knowledge, but in certain matters, such as the preparation of *Osarbandies* and the prevention of the wastage of water, *panchayats* might be helpful. It has been decided that the Superintending Engineer, I Circle, should investigate in this direction in selected areas and should propose rules for defining the powers of such *panchayats*, after which further action will be taken. Three co-operative irrigation societies are in the initial stages. **Burma.**—The Chief Engineer, Irrigation Department, reports that the formation of Water-course Committees for distribution of water is encouraged and that they do not function very well at present. No further action is necessary. **Bihar and Orissa.**—The question of the formation of irrigation *panchayats* for the management of and distribution from village field channels was considered in 1916, when it was decided that owing to lack of communal spirit in irrigating villages, the establishment of *panchayats* or irrigation boards for the distribution of water was not a practicable proposition in this province. Another objection raised at that time was that because water is supplied under a personal agreement between Government and each individual cultivator, Government are legally bound to supply water to the land of each signatory to the lease and cannot, therefore, make over their responsibility to an irrigation board. The same reasons still hold good and the recommendation is, therefore, not acceptable to the local Government. In actual practice, however, Government seldom interfere in the contribution of the water after it leaves the outlet in the Government channel and distribution is managed by the cultivators themselves under the supervision of a headman or *lambardar* selected from amongst the more influential persons concerned with each lease and appointed by the Subdivisional Officer in consultation with the lessees. The *lambardar* receives a fee from Government in proportion to the assessment of water rate for various duties connected with distribution, assessment and collection, but he is not really a Government servant and what Government want to encourage is a better recognition by the cultivators of the *lambardar* as their own representative and leader and of the advantage of abiding by his decisions in the matter of distribution of water.

Subject with paragraph of the Report).	Action taken by the Government (or Administration).
	Central Provinces.—Irrigation *panchayats* are in existence for the purpose and their efficiency is gradually improving.
	North-West Frontier Province.—The time has not yet arrived for this in the North-West Frontier Province.
55. Establishment of a special agency for Minor Irrigation Works (paragraph 279).	**United Provinces.**—It is hoped in due course to extend the activities of the Irrigation Branch to minor irrigation schemes when the necessary staff and funds are available. There is a proposal to retain the seventh circle (Sarda), which was to have been abolished this year, for an investigation, among other matters, into several possibly remunerative schemes of this class which might be taken up.
	Burma.—The Financial Commissioner (Transferred Subjects) has been asked to report on this recomamendation after consulting the Chief Engineer, Irrigation Department.
	Bihar and Orissa.—There is ample scope in this Province for the addition of such an agency to the establishment of the Irrigation Department but there is a shortage of qualified divisional officers and there is also no suitable legislation for undertaking mnor irrigation works and recovering the cost from the tenantry benefited. The Minor Irrigation Works Act of 1922 deals only with the landowners and as this has been found to be unsatisfactory, proposals for amending the Act to permit of more direct dealing with the tenants are under consideration. The formation of a special permanent division must be postponed until after amendment of this Act. There is, however, in existence at present a temporary division for project work which is made use of by the people through their District Officers for investigating likely irrigation schemes or advising on existing schemes, which serves the purposes of this recommendation. The recommendation has been accepted for action at some futured ate when the financial condition of the province has improved. A special minor works division will involve a recurring expenditure of about one lakh of rupees.
	Central Provinces.—The establishment of such a special agency has not yet been considered. The Irrigation Committee doubt if the appointment of a special officer is necessary unless the construction of irrigation works is decided on in areas where there are no representatives of the Irrigation Department.
	North-West Frontier Province.—There is no scope for the employment of a special agency. There are no Government minor irrigation works in the province and any that may be sanctioned in the future should be constructed and maintained by the Irrigation Department or the Civil Canals Establishment under the former's advice.
56. Pumping and Boring Operations and Tube Wells (paragraph 280).	**Bengal.**—The question is under consideration.
	United Provinces.—The United Provinces Government do not accept the recommendation that the system of subsidizing tube wells at present in force in that province should be at once discontinued. To do so now would be to cause a decided check to the popularity of these wells at a time when there seems a possibility, with suitable encouragement, of a large increase in this form of irrigation. During the past year, however, this section of the Department has made every effort to encourage private enterprise to undertake the construction of these wells and to ensure that in the case of approved contractors the cost to the owner will be no greater than if the well was constructed by the department direct. Success has not been attained so far and contractors do not appear to find the work remunerative unless at rates which are far in excess of those for which the department can do the work after allowing for all overhead charges. Further efforts are in progress with the aim of eventually abolishing the subsidy and getting the work done entirely by private enterprise.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Punjab.—The scheme for the installation of the battery of tube wells referred to in the Royal Commission's Report has not come into operation. During the last year several other schemes of the same nature have been drawn up and have been, or are being, submitted for the consideration of Government. **Burma.**—The new Agricultural Engineer has recently joined his appointment and he will be instructed later to take up the survey of sub-soil water supplies in suitable areas, and Deputy Directors have already been instructed to make a preliminary survey of localities likely to be suitable from the cultivation point of view. The recommendations regarding Government assistance in regard to the construction of tube wells, encouragement of private enterprise and entrusting of pumping and boring operations to the Agricultural Department are accepted. **Bihar and Orissa.**—The economics of tube well irrigation are being studied at the Sabour farm from an agricultural standpoint and similar experimental work will be carried out at the Patna farm; the necessary engineering records will also be kept. The Agricultural Engineer in the course of work for the improvement of village wells is accumulating valuable data on sub-soil water supplies and the areas in which strainer tube wells are successful. Besides additional boring plant, the Agricultural Engineer has recently been provided with three testing sets for determining the discharge of tube wells. The development of this type of work will require additional expenditure in the future. An accurate meter is required for determining the quantity of water supplied to crops, this will cost about Rs. 2,100 non-recurring and some two or three will be needed. At present, sub-soil water survey is partly conducted indirectly at the expense of well owners in promising areas. To prove other areas would involve a small gang of borers and a supervisor on experimental work only at a non-recurring cost of Rs. 12,000 for plant and some Rs. 10,000 average recurring. This is not an immediate necessity. But the Agricultural Engineer will receive an annual allotment of Rs. 5,000 for experimental work in tube wells and boring generally. This is a more urgent need. Conditions on the Chota Nagpur plateau proper are far from promising and there seems little hope of securing water supplies by boring. The Geological Survey were consulted on the point in 1911. But there are areas lying between the plateau and the alluvial tracts of South Bihar (in the Bhagalpur and Patna and Chota Nagpur Divisions) where the occurrence of rock at comparatively small depths prevents tube wells being constructed at present. In such areas, rock drilling might lead to successful results. There is a demand for assistance for the improvement of water supplies in Chota Nagpur and South Bihar and the possibilities of shallow rock drilling are worth investigating. A hand power plant capable of drilling small holes to depths not exceeding 250 feet would cost some Rs. 3,000 only and about Rs. 2,000 per annum to operate. A set of this size will be purchased first for experimental work and for subsequent testing of areas. The cost per foot bored varies enormously with the rocks met with and the depth of the boring. The Director of Agriculture has accordingly been requested to include these items in the list of his new demands. The recommendation that Government assistance in regard to the construction of tube wells should be limited to the provision of information, of technical advice and finance, where required, on the *taccavi* system and to placing boring equipment and skilled labour at the disposal of the landholder on payment of a moderate fee, has been accepted, being entirely in agreement with the present policy in Bihar and Orissa.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	The local Government also agree that private enterprise in the construction and maintenance of tube wells should not be discouraged by Government competition. At present, however, the pioneer and exploratory work of the Agricultural Department has not reached the stage where the construction of tube wells at prices which the agriculturist can pay is attractive to private enterprise. The recommendation that pumping and boring operations should be entrusted to the Agricultural Department has been accepted with the qualification that only pumping and boring operations for agricultural purposes are included. Water supplies for drinking and sanitary purposes are the concern of the Public Health Department who are encouraging private contractors to take up the work. Pumping and boring for industrial purposes can quite well be left to private enterprise. **Central Provinces.**—Boring experiments are being made in Berar where water is scarce.
57. Ordinary Wells (paragraph 281).	**Bengal.**—The question is under consideration. **United Provinces.**—The well boring division of the Agricultural Engineering Section has continued its work along the usual lines. In the present state of co-operative development, Government are not prepared to ask co-operative societies to undertake costly works which require technical knowledge. Where a tract shows abandonment of irrigation wells the present practice is that the Revenue Department issues orders to Collectors to ascertain during their cold weather tour the causes of abandonment, so that the question can be satisfactorily looked into. **Punjab.**—A considerable staff with about 100 boring plants have been at work boring existing wells with a view to augmenting their water supplies. **Burma.**—The Agricultural Engineer already deals with improvement of pumping apparatus. No other action by the Department is demanded. The questions of co-operative sinking and working of wells and the institution of an enquiry regarding abandoned wells are not applicable to the conditions in Burma. **Bihar and Orissa.**—The local Government agree that the construction of ordinary wells is essentially a matter for private enterprise but that there are many ways in which the Agricultural and Irrigation Departments can help the landholder. At present the Agricultural Engineer assists the owners of ordinary wells in the following ways :— (*a*) By test boring, when necessary, for the construction of new wells ; (*b*) By sinking open tubes, through the foundation clay to enable a better water-bearing sand to be tapped or by the addition of smaller strainer tubes to existing masonry wells for the same purpose ; (*c*) By the supply and fitting of *Rahat* bullock pumps, suitable to various sizes of masonry wells ; (*d*) With advice in difficulties. At present no new proposals are needed and steady development on existing lines is called for. Government have recently sanctioned an addition to the number of small size boring plants employed on the improvement of village wells. Work is at present in progress on small tube wells for co-operative societies and the recommendation for encouraging the co-operative sinking and working of wells has been accepted.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration)
	There are only four districts in this province where well irrigation is of any importance. The local Government have no information to indicate that there has been any abandonment of well irrigation on a large scale. If such a movement had taken place, it could not have escaped notice. They do not consider, therefore, that any investigation into the causes of abandonment of wells is necessary in Bihar and Orissa. **Central Provinces.**—Irrigation from wells is encouraged by loans for construction and plant. **North-West Frontier Province.**—The local irrigation Branch has so far had nothing to do with wells but any advice asked for will be freely given.
58. Establishment of close relations between Agricultural and Irrigation Departments (paragraph 283).	**Madras.**—Orders have been issued enjoining on irrigation officers to consult the Agricultural Department at every stage of investigation of new projects. The Government have also decided that short courses of training in agriculture are not likely to be useful to officers of the Public Works Department. **Bengal.**—The local Government agree with the opinion regarding the establishment of closer relations between the two departments. The question of the institution of short courses in agriculture for irrigation officers is under consideration. **United Provinces.**—The two departments have been collaborating in experiments in the Sarda area, to investigate the best methods of using the water now available there from the new canal system for cultivation. The following arrangements have been made this year for training junior officers of both departments:— (*a*) Four officers of the Irrigation Branch have been selected and arrangements are being made to send them to the Government agricultural farm at Shahjahanpur to study green manuring. (*b*) A course of six lectures on irrigation has been delivered to the students of the Agricultural College by the Research Officer, Irrigation Branch, and Professor of Engineering (Irrigation), Thomason College, Roorkee. It is also proposed to post an Irrigation Branch officer as Agricultural Engineer, and thus close liaison will be maintained. **Punjab.**—Eleven officers of the Irrigation Department attended the one month's rural economy course at the Agricultural College during the past year. Arrangements are in progress whereby an Irrigation Officer will give a course of lecturres to the students of the Agricultural College and the staff of the Department at Lyallpur. **Burma.**—The Director of Agriculture has been asked to report on these recommendations in consultation with the Chief Engineer, Irrigation. **Bihar and Orissa.**—The local Government have accepted the recommendation that closer relations should be established between the Agricultural and the Irrigation Departments. The Director of Agriculture is already consulted on new irrigation projects and gets helpful suggestions from the Chief Engineer, Irrigation Department. The recommendation for the interchange of courses on agriculture and irrigation has been accepted in principle and reserved for action at some future date, when an agricultural college is established in the Province. **Central Provinces.**—The Agricultural Department is consulted before a new project is undertaken. The programmes for demonstration and experimental work of the Agricultural Department are prepared to meet the requirements of, and in consultation with, the Irrigation Department. Plots are also opened in commanded areas to demonstrate the growing of irrigated crops.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	North-West Frontier Province.—This necessity has been recognised in the past and prior to the construction of the Upper Swat Canal a complete soil survey of the area commanded was made and on that survey the areas available and their qualities were judged.
59. Establishment of Irrigation Advisory Committees (paragraph 284).	**United Provinces.**—There is already an Irrigation Board in these provinces composed of the Chief Engineer, Open Canals, two Superintending Engineers, one Deputy Magistrate, the Director of Agriculture and four non-official members selected by the Legislative Council. Of these four non-official members, three are zamindars from canal irrigated districts. All general grievances can be aired through this Board. Individual complaints are settled by the men on the spot, that is, the Subdivisional Officer and Executive Engineer. The Superintending Enginneer and the Collector of the District receives appeals if any real hardship remains unremedied. The present system is working satisfactorily. Individual complaints and abuses there are and always will be ; but no Board can deal with such matters which must be investigated on the spot with all the parties concerned present. **Punjab.**—By arrangement with the Irrigation Department, the local gazetted Agricultural Officer is now a member of each Canal Advisory Committee. **Burma.**—The Government agree with the Chief Engineer, Irrigation, that cultivators should be encouraged to take their grievances, if any, to the Executive Engineer concerned as the knowledge of them is of great assistance to him in managing the distribution of water. The Government foresee in the proposed Committee a direct discouragement of this practice and are therefore unable to accept this recommendation. **Bihar and Orissa.**—An Advisory Committee for the Superintending Engineer, Son Circle, has been established in this province. During a two years' trial it has not proved much of a success but is being tried for another two years. There is a regular departmental system for receiving, enquiring into and disposing of individual complaints in regard to irrigation matters and this is sufficient until the people can organise their own committees for joint representation when needed. **Central Provinces.**—There is a Standing Committee of the Provincial Legislative Council. The recent Irrigation Committee considered the formation of an Irrigation Advisory Committee undesirable and that the Standing Committee of the Legislative Council is sufficient. **North-West Frontier Province.**—A Canal Advisory Committee for the Government Canals Area has just been sanctioned.
60. Research on Irrigation problems (paragraph 287).	**Madras.**—Proposals involving a non-recurring expenditure of Rs. 2,49,400 and a recurring annual expenditure of Rs. 9,200 have been received from the Board of Revenue, in consultation with the Chief Engineer for Irrigation and the Director of Agriculture, for the opening of an experimental station for research work on irrigation problems.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	United Provinces.—With a view to eventually establishing a research division, a Research Officer has been appointed; but for financial reasons and also because much preliminary work must be done before such a division can be usefully established, the post has been combined for the present with that of Professor of Civil Engineering (Irrigation) at the Thomason College, Roorkee. In his spare time and during the college vacations, this officer is gradually preparing the way for a fully developed research division. He has also done some very useful theoretical work and has been to the Punjab and Bombay, each of which possesses a research circle with several research divisions, and the latter has also an agricultural farm of 200 acres for research work. This officer and the Punjab and Bombay Research Officers have prepared a memorandum in consultation giving their views on research and how it should be organized. He has also taken over a small distributary system near Roorkee for experimental work and has been given an assistant and a small staff with which he will tackle two important questions :— (1) Losses of water by absorption both in canals and in cultivator's water-courses with a view to economising water for use elsewhere. (2) Different methods of distribution, with a view to inducing the cultivator, if possible, to take less water to mature his crops. At present, it is admitted, that he takes too much, and often reduces the yield of his field on that account. The Research Officer, in dealing with such problems frequently consults the Agricultural Department, and thus the liaison between the two departments recommended by the Commission is secured. The Public Health Department (Malariology Branch) is also interested. **Punjab.**—A water-logging board has been formed which will deal with problems connected with water-logging and includes officers of the Irrigation and Agricultural Departments. **Burma.**—The Chief Engineer, Irrigation, reports that the Irrigation Department keeps in touch with the research work done in the United Provinces, the Punjab and Bombay, and that the amount of irrigation done in Burma is not sufficient to justify a special staff for irrigation research. The recommendation regarding collaboration in research work between the Agricultural and Irrigation Departments is accepted and to a certain extent carried out. Enlistment of the assistance of the university in irrigation research is not practicable at present. **Bihar and Orissa.**—Irrigation in Bihar and Orissa is not sufficiently important to justify a special research station and the recommendation cannot be considered at present with the existing shortage of senior irrigation officers and the financial stringency of the province. **Central Provinces.**—The question is under consideration. No trouble due to water-logging and the formation of alkali lands in irrigated areas have arisen in this province. **North-West Frontier Province.**—The permanent Engineering Officers are obtained on loan from the Punjab; at present the staff is too small to undertake research.

Subject with paragraph of the Report).	Action taken by the Government (or Administration).
61. Preparation of Drainage Maps (paragraph 289).	**United Provinces.**—The Director of Agriculture recommended the introduction of a system of drainage to prevent the accumulation of surface water on *do-fasli* (double crop) land, which destroys the *kharif* crop and reduces the yield of the *rabi*. The loss thus caused is enormous in years of plentiful rainfall, and the result of proper drainage would be an increase in the quality and quantity of land available for *do-fasli* cultivation. The Director proposed that the districts of Moradabad, Gonda, Basti and Gorakhpur should be surveyed. As already pointed out the Irrigation Branch have no staff at present to carry on the necessary surveys until the Sarda Canal has been completed. Moreover, it is doubtful whether these drainage schemes can be made productive; and therefore the existing financial position of the province will hardly permit of any undertaking in this direction. The matter will consequently have to be held over till next year. **Burma.**—Drainage maps with reference to alkali lands are not required in Burma. Drainage of water-logged areas in the Delta is receiving the attention of the Irrigation Department. **Bihar and Orissa.**—Drainage surveys will be undertaken in canal irrigated areas and elsewhere and drainage maps prepared. Such surveys and maps would be specially useful in Orissa and North Bihar as well as in the Son Canal area but would be expensive and not directly remunerative. Some work in this connection is now being undertaken on a small scale by a temporary Survey Division in North Bihar. A proposal for a more comprehensive drainage survey is under consideration. There is ample scope for a special Drainage and Embankment Division in North Bihar alone but shortage of staff and paucity of funds are in the way. The recommendation has been accepted and action will be taken at some future date when funds are available. It is estimated that the cost will be about Rs. 2 lakhs. **Central Provinces.**—See remarks against item 60. **North-West Frontier Province.**—Drainage maps have been prepared for the Upper and Lower Swat Canal areas and much work has already been done in the construction of drains on areas threatened with water-logging. The work is nearing completion. The Kabul River Canal area has already got a system of drains in places requiring them. A "History of Drainages" has been written and is to be brought up-to-date annually.
62. Irrigation in Sind (paragraphs 290-291).	**Bombay.**—The remarks and observations of the Royal Commission have been taken into consideration in dealing with the agricultural problems in the Sukkur Barrage area.
63. Irrigation in Bengal (paragraph 292).	**Bengal.**—The Governor in Council has accepted the recommendation to appoint a technical committee of experts to examine and report on the advisability of setting up a Provincial Waterways Board in this province. It is proposed further to refer to this committee questions regarding the present organisation and future constitution of the department in relation to the problems of irrigation and navigation in this province, the separation of subjects now within the scope of the Irrigation Department and the expansion of the department to enable it to cope with its responsibilities. An announcement presaging the appointment of a committee of experts was made in the March 1929 session of the Bengal Legislative Council. Further, the Government of India,

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Department of Industries and Labour, have been moved to appoint a committee consisting of three or four members of the Board of Irrigation to examine and advise on these and certain other questions. It is proposed to await the report of this committee before taking any further action in the direction of the recommendations of the Royal Commission on Agriculture. It is, therefore, not possible now to formulate definite schemes in regard to these recommendations or to prepare estimates of cost. (**Burma.**—Government have given instructions to the Chief Engineer to keep in touch with inquiries going on in Bengal where a special committee of experts has been proposed.)
64. Hydroelectric development (paragraph 295).	**United Provinces.**—Great strides have already been made in the generation of electric energy from canal falls in these provinces. The first scheme of power development from canal falls was initiated in 1913, when a turbine station was installed at Bahadrabad for the construction of the Bhimgoda weir. In 1925, a scheme was prepared on a commercial basis, and the Bahadrabad power house was supplemented and utilised for supplying power to the towns in the Hardwar Union and to Roorkee. Subsequently schemes for generating power from Palra and Bhola falls were prepared, and lastly the Ramganga hydro-electric pumping scheme was designed. The Bahadrabad scheme was completed in January 1927, and works in connection with other schemes are in progress. These schemes are all linked together, and combined by means of a "grid". By them electrical energy will be supplied to all towns of over five thousand population in the districts of Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Bijnor and Moradabad, for domestic, industrial and agricultural purposes. It is hoped that all these schemes will be completed and power available in all the towns before the summer of 1930. Further development in this direction will depend upon the increased demand for power. The power generated at Palra falls will be utilized for pumping water from the Kali Nadi into the Ganges Canal for irrigating an additional 26,000 acres of land. By the Ramganga scheme about 50,000 acres of land will be irrigated by water electrically pumped from the Ramganga river. It is considered, however, that further schemes of power development and pumping from rivers for irrigation will not be paying propositions unless the cultivator and zamindar are willing to pay much higher rates than are charged for ordinary canal irrigation. Power will be sold at very cheap rates, *viz.*, one anna per electrical unit for pumping water for irrigation from the wells, jhils and *nadis* and arrangements will be made for taking branch lines to areas where the demand for electricity for such pumping is sufficient to justify the outlay. In order to popularise electrical pumping two demonstration tube wells have been sanctioned for the Bijnor and Moradabad districts, and experiments on ordinary wells in Bijnor, Meerut and Aligarh districts are being organised with a view to finding out the capacity of such wells and the sizes of pumps that would suit them. A special irrigation division in the Meerut and Aligarh Divisions is being created for such experimental work. **Burma.**—The recommendation regarding obtaining of advice from firms of Consulting Engineers in regard to provincial hydro-electric schemes has lately been given effect to in Burma. The recommendation regarding settlement of probable disputes is accepted.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—There are at present no hydro-electric pumping schemes under consideration in this province. The only possibility in this connection is the use of the power available at canal falls on the Son system for pumping water from tube wells for sugarcane irrigation in the hot weather when the supplies available in the Son river are very limited. This matter will be taken up by the Agricultural Department who are concerned with tube well pumping schemes and, if there are prospects of success, the advice of firms of consulting engineers will be obtained. The local Government accept the suggestion that should disputes between provinces in any matters arising out of hydro-electric development occur, these should be referred to committees appointed *ad hoc*. **Central Provinces.**—Preliminary surveys were carried out ten years ago, but no further action has been taken. **North-West Frontier Province.**—There are five schemes under investigation for pumping by hydro-electric power from the Government canals in the province but it would be premature to say anything about them at present beyond that they are comparatively small.
CHAPTER XI.—Communications and Marketing. 65. Constitution of Road Boards (paragraph 305).	**United Provinces.**—A Board of Communications already exists in this province and the question of placing a grant at the disposal of the Board for distribution has often been raised, but the Government have not in the past accepted the proposal. The recent District Board Finances Committee has recommended that a recurring sum should be placed at the disposal of the Board of Communications for grants-in-aid for the construction of new roads or (at present) for the reconstruction of existing roads. Provision for a whole-time Secretary for the Board of Communications is now being asked for. Both proposals are being considered. **Burma.**—No action is required. **Bihar and Orissa.**—The matter is under the consideration of Government who are awaiting the result of the proposals to levy a provincial tax on motor vehicles. **Central Provinces.**—A Provincial Advisory Board of Communication exists.
66. Development of Subsidiary Communications (paragraphs 305-307).	**Bengal.**—The recommendations of the Road Development Committee have supervened on those of the Agricultural Commission about road development and are at present under consideration. **United Provinces.**—A programme has been prepared for the improvement of the roads, which will be classified as (1) provincial, (2) district, (3) tahsil, (4) local metalled, (5) local unmetalled, and (6) village tracks. A special scheme is being prepared for roads in the hill districts. (1) *Provincial roads.*—290 miles of roads managed by district boards are to be added to the existing mileage of about 3,100. Some new roads are also to be constructed. It will take a number of years to work through this scheme. (2) *District roads.*—A scheme has been approved by which subject to certain safeguards, Government will make grants-in-aid of half the cost of maintaining these roads. The mileage will be 2,033, of which 653 are still unmetalled, but district boards will be encouraged to initiate projects for metalling the latter. The estimated cost of maintaining this system will be about Rs. 9 lakhs and the Government grant will be about Rs. 4½ lakhs. It will take three or four years to provide for the whole grant. (3) *Tahsil roads.*—The mileage is 1,029, of which 193 miles are unmetalled. The estimated cost will be Rs. 5·37 lakhs, half of which will be met from Government grants, the system of which will be the same as for district boards.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	(4) *Local roads.*—All other roads will be regarded as local roads and it will be for the district boards to deal with their improvement and development and also, if possible, to give some help in the improvement of village tracks. The boards will have considerable resources for doing so as soon as the grants-in-aid system can be completed. It is also open to them to increase their resources by raising new local taxes. Apart from the expenditure contemplated on provincial roads it will be necessary to obtain grants-in-aid amounting to Rs. 7 lakhs recurring and this will take several years to accomplish. The grants-in-aid scheme has been prepared in the form of a definite programme of progress by instalments. The first instalment of Rs. 46,000 will be put forward in the budget of 1930-31. As unmetalled roads must continue to form the major part of the communications of the province, the Local Self-Government Department is experimenting with road-making machines, which should lead to far more effective expenditure of the Rs. 7 lakhs at present devoted to this type of road. The Meerut District Board is doing work with this type of machine and other boards are interested in the question. **Burma.**—This matter is being attended to by Government. This province is not yet equipped with arterial roads and these have the first claim. It is hoped in due course to assist local bodies more out of the motor spirit cess. The question of specially subsidising village roads cannot be taken up at present. **Bihar and Orissa.**—The recommendations made in sub-paragraphs (*6*)-(*10*) of paragraph 350 of the Report of the Agricultural Commission represent the accepted policy of the local Government. The possibility of raising additional funds for road development is being examined in connection with the report of the Road Development Committee. The recommendations for paying special attention to subsidiary communications will be kept in view at the time of the formation of the Road Board. **Central Provinces.**—Maintenance and improvement of local communications is a primary charge on the funds of the local bodies. Government subsidises in suitable cases.
67. Establishment of Regulated Markets (paragraphs 329-338).	**Madras.**—On the advice of the Agricultural Advisory Committee, a draft Bill has been prepared and is now under consideration. The Bill is confined to cotton only. **United Provinces.**—In this province there are no compact areas devoted to a single main crop, and the Government are doubtful whether in the circumstances the establishment of regulated markets is likely to be successful In any case legislation would be necessary and the Government consider that the first preliminary is a market survey and that this should be done by the "Marketing Officer" when appointed. A proposal for the latter has been considered but had to be dropped for the time being for financial reasons. **Burma.**—The Committee appointed to enquire into conditions of the rice and paddy trade in Burma have been asked to advise the local Government on these recommendations. **Bihar and Orissa.**—Neither the local conditions nor the finances of this province permit the general acceptance of the recommendations. When the local Government can afford a marketing survey on a small scale, the question will be examined for some of the Government estates. No immediate action is possible. **Central Provinces.**—Action is being taken in this direction. Cotton and grain markets in Berar are regulated.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
68. Efforts to secure improved quality from producers with special reference to encouragement of co-operative sale societies (paragraphs 340-342).	**Bombay.**—The matter is under consideration. **Bengal.**—The matter is under consideration. **United Provinces.**—The question of the organisation of co-operative sale societies has received attention from the Co-operative Department. It presents considerable difficulties in regard to management and storage and owing to the fact that the grower cannot afford to wait for his money and is in many cases already in debt to the dealer before his crop is harvested. In view of the present state of the co-operative movement in the province a policy of consolidation rather than expansion is at present being pursued and the time is not considered suitable for new experiments, of which the success is doubtful until there has been a greater development of the co-operative spirit by means of education and experience in credit societies and a revival of enthusiasm. **Punjab.**—Co-operative commission shops are still in existence and their number is gradually increasing. **Burma.**—The opinion is accepted where applicable to Burma. The Co-operative Department is unable to act upon it at present. It is unable to attend to the development of co-operative sale societies **Bihar and Orissa.**—Bihar and Orissa is only indirectly concerned with the export wheat trade. The area under wheat in the province is comparatively small and any surplus Bihar wheat undoubtedly goes to Indian cities. Bihar can and does grow strong wheats and the Pusa wheats are spreading. Calcutta flour mills pay good prices for the best Bihar wheats. Any large increase in the Indian wheat exports is, however, likely to be from Karachi. No action on the recommendation for bearing in mind the possibilities of developing an export trade in high class strong wheat is called for unless a radical change in the course of the world's wheat trade occurs. If, however, a world shortage of strong wheats occurred, the export of Bihar wheat *via* Calcutta would be a practical proposition and the position will then be reconsidered. Meanwhile, the Agricultural Department will go steadily ahead with the introduction of improved varieties The Royal Commission recommend that effective pressure to secure improved quality from the producer must, in the main, be applied by the Agricultural or Co-operative Departments. With the present staff, neither department is in a position to take any effective action. The recommendation has, therefore, been accepted in principle but the action to be taken on it has been reserved for future consideration when the staff of the Agricultural Department has been considerably strengthened. The recommendation that the most effective method of enabling the cultivator to secure an adequate premium for superor quality is organisation for the purposes of sale and that co-operative sale societies should be encouraged in all possible ways by the Agricultural and Co-operative Departments has been accepted. The Registrar of Co-operative Societies hopes to get co-operative sale societies started in consultation with the Director of Agriculture and in close co-operation with him. **Central Provinces.**—Efforts to organise co-operative sale societies are being made by the Agricultural and Co-operative Departments with particular reference to cotton. The services of agricultural officers are lent to co-operative organizations for this purpose.
69. Auction sales by Agricultural Departments (paragraph 343).	**Bengal.**—The matter is under consideration. **United Provinces.**—No action has yet been taken. **Burma.**—The principle is accepted and is being acted upon as far as practicable. **Bihar and Orissa.**—This recommendation has been accepted as a general principle. No such sales are comtemplated or needed at present.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Central Provinces.—The Agricultural Department is endeavouring to secure an adequate premium for a superior variety of cotton recently produced. No auction sales have, however, yet been held, but the possibility of adopting this system is being considered.
70. Experiments with Containers (paragraph 345).	**Bengal.**—The matter is under consideration. **United Provinces.**—No action has yet been taken. **Burma.**—This is not considered an urgent problem at present. **Bihar and Orissa.**—This applies mainly to the transport of mangoes and other fruits to Calcutta. It is not urgent and will be taken up when, and if, an expert marketing officer is appointed. **Central Provinces.**—No action has yet been taken.
71. Market Surveys (paragraph 347).	**Bombay.**—The formulating of an effective policy for the improvement of marketing and undertaking of a survey on the lines laid down in paragraph 347 of the Report is considered one of the most important problems by the Agricultural Department and the first step in this direction is the appointment of an expert marketing officer on the staff of the Agricultural Department, and proposals in this regard are under consideration. **United Provinces.**—Some work has been done on the question of trade dues and further information is being collected by an officer on special duty with the Provincail Banking Committee. A full treatment of the question, however, awaits the appointment of a marketing officer. **Punjab.**—An investigation into the marketing of the cotton crop was carried out and completed by officers of the Department during the past year from funds provided jointly by the Indian Central Cotton Committee and the Board of Economic Enquiry, Punjab. Government have recently given their approval to a proposal of the Indian Central Cotton Committee to grant two scholarships of three years each to selected graduates of the Agricultural College, Lyallpur, for training in economics. **Burma.**—The Committee appointed to enquire into conditions of the rice and paddy trade in Burma have been asked to advise Government on these recommendations. **Bihar and Orissa.**—(*Vide* item 72 below.) **Central Provinces.**—A survey of cotton marketing has already been made. Similar surveys for other staple crops are desirable and these will receive attention when sufficient staff is available.
72. Appointment of expert Marketing Officers (paragraph 348).	**Bombay.**—The matter is under consideration. **United Provinces.**—(*Vide* item number 67.) **Punjab.**—The appointment of a marketing officer is under the consideration of Government. **Burma.**—The Committee appointed to enquire into conditions of the rice and paddy trade in Burma have been asked to advise Government on these recommendations. **Bihar and Orissa.**—The local Government agree that a marketing survey is essential but it is far less urgent than many other needs and would cost Rs. 25,000 a year. The matter has, therefore, been postponed to a distant future. It may be possible later on to arrange for a small survey at moderate cost and this matter will be kept in view when funds permit. **Central Provinces.**—No expert on marketing has yet been appointed.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
CHAPTER XII.—The Finance of Agriculture.	
73. Limitation on period of usufructuary mortgages (paragraph 353).	**Bengal.**—Section 26-G of the new Bengal Tenancy Act provides a limitation of 15 years on the period of usufructuary mortgages and for redemption at any time within that period. As this Act has come into force only this year, it is too early to consider any further amendments. **United Provinces.**—No action has yet been taken. **Burma.**—This will be considered with the recommendations of the Committee on Co-operation in Burma on the subject of usufructuary mortgages. **Bihar and Orissa.**—(*Vide* item No. 75 below). **Central Provinces.**—No action has been taken. The report of the Banking Enquiry Committee is awaited.
74. Removal of restriction on operation of Punjab Redemption of Mortgages Act (paragraph 354). (Special to the Punjab.)	**Punjab.**—No remarks received from the Punjab.
75. Enactment of Legislation in regard to redemption of Mortgages in provinces other than the Punjab (paragraph 354).	**Bengal.**—*See* remarks against item 73 above. **United Provinces.**—No action has yet been taken. **Burma.**—The problem of land alienation has been under consideration of Government for many years. No special enquiry is required. **Bihar and Orissa.**—In the backward tracts, restrictions on mortgages and on the alienation of land on the lines recommended by the Royal Commission are already in force and no further action is necessary for these areas. As regards Bihar proper, the movement has been for many years past in the direction of liberalising instead of restricting the raiyat's right of transfer in his occupancy holding and it does not appear that this tendency is likely to effect adversely the efficiency of agriculture. Further, the local Government are to some extent committed to recognising the tendency. The amendment of the Bihar Tenancy Law has been under examination for some years, and in view of the magnitude of the issues involved, Government have felt bound to legislate as far as possible on lines to which both the tenants' and landlords' parties agree. A proposal to limit the right of mortgage to self-extinguishing usufructuary mortgages not exceeding 15 years was examined, and though receiving some support from the landlords' party for reasons not connected with the welfare of the raiyats, was not accepted by the representatives of the tenants who resented a proposal which might lessen the amount of the raiyat's credit. The local Government have, therefore, omitted this provision from the draft Bill which they propose to introduce at the next Council session. They propose, however, to sound both parties further on this question. At the same time, they are not sure that the necessity for restricting the right to mortgage is as clear in Bihar as it is, for instance, in the Punjab. The gravitation of the surplus agricultural population to work in the industrial centres is one factor in the desire of raiyats for freedom of transfer. **Central Provinces.**—*Vide* remarks against item 73.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
76. Desirability of extension of principle of statutory restriction on Alienation of Land (paragraph 355).	**Bengal.**—In Bengal there are restrictions on alienation by aboriginals only, under the provisions of Chapter VII-A of the Bengal Tenancy Act, which was originally introduced by a Amendment Act in 1918. For non-aboriginals, the new Act has removed all restrictions and declared all occupancy holdings to be saleable. This privilege is highly prized by the tenants and, in the present state of public opinion, any movement towards restriction would be resented. Opinions are divided as to whether the restrictions on aboriginals have proved beneficial to the people. Reports have been received from some districts that the Amendment Act has afforded a measure of protection to aboriginal tribes against falling into the clutches of unscrupulous money-lenders but others think that the amendments have not worked satisfactorily. **United Provinces.**—The re-examination of the question in this province mentioned in paragraph 355 of the Royal Commission's report consisted in a detailed examination of the movements of land between castes in each district during the period from 1909 to 1927. On considering the result, the Government decided in 1927 that losses to agricultural castes were not so serious as to call for any special legislation. The gross loss to castes classed as wholly agricultural was 444,385 acres or 1·5 per cent., but this result was complicated by the fact that castes classed as doubtful (which included Brahmans and Bhumihars) had gained 319,974 acres. Non-agricultural tribes had gained 604,827 acres. The difference between the total gains and total losses was apparently due to the fact that the list of castes shown in the statistics of 1909, and followed in this statement for the purpose of comparison, was not exhaustive. The losses of the agricultural castes were further made doubtful by the fact that all Muslim were classified as an agricultural caste, while they are certainly not all agriculturists. Their losses were 430,837 acres or 4·8 per cent. The decision of the Government was stated in the Legislative Council in answer to a question on 15th December 1928. At the Council session of June 1929, an Act was passed to amend section 16 of the Bundelkhand Land Alienation Act, 1903, by providing a legal remedy for a member of an agricultural tribe in whose favour a simple mortgage has been executed by another member of such tribe who had then defaulted in payment. The amendment provides that, if the mortgagee obtains a decree for sale, the decree may be executed by sale of the land to a member of the agricultural tribe to which the mortgagor belongs, or to a member of any other agricultural tribe residing in the district in which the land is situated. The Hon'ble High Court of Allahabad had drawn attention to the absence of any such remedy without an amendment of the Act. **Burma.**—The sentiment is approved. **Bihar and Orissa.**—The local Government do not believe that any proposal to limit the raiyat's right of alienation in Bihar in future can succeed. There has been an insistent demand in recent years for extending rather than restricting the right of transfer, and the Government Tenancy Bill to be introduced shortly in the Legislative Council provides definitely for a liberal right of transfer. It will be impossible now for the local Government to go back on this policy, and they themselves believe that freedom of transfer is generally desirable in the conditions of Bihar. The Bill, however, contains a provision which will enable them to withdraw or limit the right in the case of any area or any class of cultivators if it is found desirable to do so.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Central Provinces.—A private Bill relating to alienation of lands in Berar is under examination. For the Central Provinces, on the other hand, a private Bill has been introduced with a view to enlarge the tenants' rights of transfer.
77. Enquiry into Expropriation of Hereditary Class (paragraph 355).	**Bengal.**—The proposed enquiry may be undertaken at the time of the forthcoming census operations, if possible.
	United Provinces.—*Vide* item No. 76 above.
	Burma.—Statistics of land held by non-agriculturists are available. There is no present demand for a special enquiry.
	Bihar and Orissa.—The question will be considered but, in the absence of a revenue staff distributed over the agricultural area, it is likely that such an enquiry may not be found feasible. At present, the local Government do not anticipate that in Bihar any tendency in this direction on a noticeable scale will be found. In the backward tracts, no investigation of this kind is necessary, as the existing Tenancy Acts fully protect the cultivating classes.
	Central Provinces.—No action has yet been taken.
78. Removal of difficulties in the way of landlords investing capital in their lands (paragraph 358).	**Bengal.**—In Bengal, there are no difficulties of this nature. Section 30 of the Bengal Tenancy Act directly encourages landlords to invest capital by providing for enhancement of rent on the ground that the productive powers of the land have been increased by improvements effected at the expense of the landlord.
	United Provinces.—The Agra Tenancy Act has only recently been passed and no further action has been taken in regard to tenancy regulation. In the United Provinces Land Revenue (Amendment Settlement) Act (I of 1929), section 63D, the existing practice is made statutory that in calculating the assets, the Settlement Officer "shall also make a deduction for improvements which have increased the assets of the *mahal* constructed by or at the cost of the proprietor or under proprietor or by or at the cost of tenant, etc." This is further dealt with in paragraph 4 of "Instructions to Settlement Officers" and rule 36 of the Rules under the Act.
	Burma.—There is no special tenancy legislation in Burma. Encouragement to landlords to invest capital in land was one of the objects of the Burma Agrarian Bill which has lately been put forward and withdrawn owing to opposition of landlords. No further move in the matter is now proposed. The proposal regarding the establishment of home farms by landlords does not apply to Burma.
	Bihar and Orissa.—The recommendations made in paragraph 358 are not, in the opinion of the local Government, suitable to the conditions of Bihar. Owing to the extreme subdivision of proprietary rights, the majority of landlords are petty proprietors, in many cases, little bigger than ordinary raiyats and could not in any case afford to take up scientific farming. If more facilities for acquiring raiyati lands were given, there is a grave danger that the rights would be used for the expropriation of the cultivator without any real improvement in the standard of cultivation. As a general rule, only the big landlords could undertake scientific farming but very few of them do so and it would be unwise to legislate for this small minority.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
79. Working of Land improvement Loans Act and Agriculturists' Loans Act (paragraphs 359 and 362).	**Central Provinces.**—No action has yet been taken. **Bombay.**—The question of giving the co-operative societies and their members the same concessions in the matter of remissions of loans under the Agriculturists' Loans Act as are extended to cultivators who are granted loans direct by Government, is under consideration. **Bengal.**—The Land Improvement Loans Act is well known to the landlords in Bengal and no further propaganda is necessary to make it known to them. The question of placing part of the allotment under the Land Improvements Loans Act at the disposal of land mortgage banks and other recommendations in paragraph 362 of the Report, will be considered in connection with the recommendations made by the Tenth Conference of Registrars of Co-operative Societies held in 1928. **United Provinces.**—The only measures taken during the year—in which very large sums have been given as loans under the Agriculturists' Loans Act owing to the failure of the monsoon—was the successful introduction in Bundelkhand and elsewhere of a system whereby, instead of advancing cash to buy seed, good seed purchased by the Agricultural Department was advanced and recoveries were made in cash. **Burma.**—The Financial Commissioner (Transferred Subjects) has been asked to report regarding the working of the Land Improvements Loans Act. The placing of part of the allotment under the Land Improvements Loans Act at the disposal of land mortgage banks will be considered when such banks are firmly established. **Bihar and Orissa.**—The recommendation that steps should be taken to make landlords better acquainted with the facilities offered by the Land Improvements Loans Act does not call for any action as the local Government think that the facilities under the Act are already well known to landholders in Bihar and Orissa. The consideration of the recommendation that part of the allotment under the Land Improvements Loans Act should be placed at the disposal of land mortgage banks where these are firmly established, provided that steps are taken to ensure its utilisation on objects which fall within the scope of the Act, has been postponed until the policy with regard to the establishment of land mortgage banks has been settled as a result of the deliberations of the Indian Banking Enquiry. The local Government do not consider that the co-operative societies in this province are at present suitable agencies for the general distribution of Government loans. But they agree that where loans given under the Agriculturists' Loans Act are remitted similar clemency ought to be shown in the case of agriculturists' loans distributed through co-operative societies. **Central Provinces.**—The present working of the Acts is satisfactory.
80. Working of Usurious Loans Act (paragraphs 364-365).	**United Provinces.**—The Provincial Banking Enquiry Committee propose to consider this point this year. **Burma.**—The High Court of Judicature, Rangoon, has been asked to advise. **Bihar and Orissa.**—The question is under consideration. **Central Provinces.**—Owing to the illiteracy of the debtor class, courts are not placed in possession of all the facts relating to transactions and debtors themselves do not raise the plea of excessive interest. The benefit conferred by the Act is less than it should be owing to the difficulty of the courts in putting it into operation and courts rarely take action *sec motu*.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
81. Examination of case for Money-lenders' Act (paragraph 366).	**United Provinces.**—This will probably come within the purview of the Provincial Banking Committee also. **Burma.**—It is not proposed to take any action on this recommendation at present. **Bihar and Orissa.**—The question is under consideration. **Central Provinces.**—No action has yet been taken.
82. Examination of case for Rural Insolvency Act (paragraph 367).	**United Provinces.**—This will probably come within the purview of the Provincial Banking Committee also. **Burma.**—The proposal is so far-reaching that the Government are not at present in a position to take it up. **Bihar and Orissa.**—The question is under consideration. **Central Provinces.**—No action has yet been taken.
83. Conciliation Bodies (paragraph 367).	**United Provinces.**—No steps have yet been taken. The Provincial Banking Committee is making some inquiries about rural indebtedness which may provide guidance for a move in this direction. **Burma.**—The proposal is so far-reaching that the Government are not at present in a position to take it up. **Bihar and Orissa.**—The matter is under consideration. **Central Provinces.**—No action has yet been taken.
84. Appointment of Official Receivers (paragraph 367).	**United Provinces.**—This will probably come within the purview of the Provincial Banking Committee. **Burma.**—The proposal is so far-reaching that the Government are not at present in a position to take it up. **Bihar and Orissa.**—The matter is under consideration. **Central Provinces.**—No action has yet been taken.
CHAPTER XIII.—Co-operation.	
85. Enquiry into working of Co-operative Movement in provinces other than the Central Provinces, the United Provinces, Madras and Burma (paragraph 373).	**Bengal.**—This recommendation is awaiting final consideration pending the consideration of the recommendations made by the Tenth Conference of Registrars of Co-operative Societies held in 1928. **Burma.**—Such a Committee has just finished its labours and submitted a report. ***Bihar and Orissa.**—The proposal to appoint a committee on co-operation is under consideration. **North-West Frontier Province.**—There is no separate Co-operative Department in the province. The Registrar of Co-operative Societies, Punjab, is also the Registrar in the North-West Frontier Province. The movement is still its infancy but co-operation is steadily growing and it is hoped that it will expand satisfactorily with the provision of new staff. The idea of co-operation for the general good holds out no inducements to the Pathan peasantry whose marked individualistic character and internal feuds are serious barriers in the way of general combination for agricultural purposes but matters are improving with the advance of education, etc.
86. Building up of efficient Co-operative Staff (paragraph 374).	**Madras.**—Training classes are held by District Federations for training panchayatdars of societies for which the Government have provided a subsidy of Rs. 21,000 in the budget estimates of 1929-30. The question of increasing this amount is under consideration.

*The views of Government on the subject of co-operation are subject to modification after this Committee submits its report.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	For the training of official and non-official staff training classes are held at five centres in the mofussil. The Government have provided a recurring subsidy of Rs. 20,000 at Rs. 4,000 each for the running of these training institutes for a period of five years and have also placed at the disposal of each school a Sub-Deputy Registrar to supervise the classes at a cost of Rs. 12,225 per annum. At Madras, the Government have sanctioned the opening from 1st July 1929 of a class in the Institute of Commerce for giving instructions to inspectors and aspirants to co-operative service in book-keeping, banking, co-operation and auditing. A Deputy Registrar of Co-operative Societies has also been lent for a period of two years at a cost of Rs. 3,960 per annum. **Bombay.**—Proposals for the strengthening of the staff by creating the posts of a Deputy Registrar, an Assistant Registrar and an office Superintendent and increasing the number of agricultural organisers are under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—Every effort has been made to reorganise existing societies, to weed out inefficient and sleeping members and to infuse a fresh element capable of keeping the movement on right lines. A better class of official is being recruited more in touch with rural conditions and with the hopes and aspirations of persons in rural areas. The aim of the present policy is to ruralise the service charged with the duty of training villagers in methods of co-operation and of supervising the work of subordinates in the Co-operative Department. Training (which includes instruction in agriculture, village sanitation, and cottage industries) is being systematically given to the staff entrusted with the duty of organization of societies. That staff has now been brought to work under the new Co-operative Union instead of working under the managing directors of district banks. The length of the training class for supervisors is now six months and another extension is in contemplation. That for inspectors lasts nine months. Refresher courses are also given. Special care is being devoted to the education of member secretaries of primary societies. **Punjab.**—*Vide* remarks against item 90 below. **Burma.**—The recommendation is accepted. **Bihar and Orissa.**—Every effort is being made to build up such a staff. The Development Branch of the Bihar and Orissa Co-operative Federation, which gets a subsidy of Rs. 5,000 annually from Government, has appointed five Propaganda Officers, one for each Civil Division. It now proposes to appoint an Educational Inspector for each district, if not for each bank, in order to begin the work of educating the people in the principles and practice of co-operation in right earnest. The Registrar of Co-operative Societies recommends that the Government grant should be increased from Rs. 5,000 to Rs. 26,000 a year, to enable the Federation to do so. The proposal is under consideration. In Bihar and Orissa, the co-operative movement is largely in the hands of honorary workers and it is not proposed to weaken their status. **Central Provinces.**—Special attention is paid to the training and improvement of the staff.
87. Supervising Unions (paragraph 375).	**Madras.**—All supervision funds are being pooled under the control of District Federations. The supervision fund is, however, too small in a number of districts to pay for the central expenditure which is necessary to see that the supervisors and unions are more active and effective. The question of granting a subsidy of Rs. 15,000 to the weaker Federations is under consideration.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bombay.—The question of supplementing the resources of the Supervising Unions, which are discharging their responsibilities efficiently, with grant-in-aid, is under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—A provincial Co-operative Union on the Madras model has been formed (1928). This union controls the staff supervising the primary societies. It is financed by contributions from the Central Banks and a grant from the Government estimated at Rs. 66,000 in the current year. 51 central banks out of 72 have joined the Union up to date. **Punjab.**—Unions of this type do not exist at present as it has hitherto been felt that better supervision can be secured by other means. **Burma.**—The report of the Committee on Co-operation is being examined. **Bihar and Orissa.**—The present position is that the Central Banks are carrying on the work of both financing and supervision, and supervision has been rather neglected. The Registrar of Co-operative Societies is therefore of opinion that supervision should be taken away from the Central Banks and entrusted to separate agencies under the Bihar and Orissa Co-operative Federation, and that the cost of supervision should be defrayed by the societies by securing proportionate reduction in the rate of interest on their borrowings from the Central Banks. This subject was discussed at the Conference of Assistant Registrars which appeared to be generally in favour of a continuance of the present system. Non-official opinion is generally in favour of supervision continuing in the hands of Central Banks. The question is now under the consideration of Government. **Central Provinces.**—There are no supervising unions but there are Institutes which supervise and educate co-operative societies and carry on general propaganda work.
88. Policy to be followed in selecting Registrars of Co-operative Societies (paragraph 376).	**Bombay.**—The question of training a junior civilian in the work of the Co-operative Department is receiving attention. The proposal for the deputation of officers of the Department to Europe to study the co-operative movement there is under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—A proposal is under consideration for an officer under training to understudy the present incumbent of the post. One Deputy Registrar, while on leave in 1923 studied the movement in various countries. **Burma.**—The recommendations are accepted generally. Action is being taken to appoint an understudy to the Registrar. **Bihar and Orissa.**—The local Government agree that the best man available should be selected as Registrar of Co-operative Societies. The questions as to the period for which the Registrar should hold office and whether there should be an officer under training to succeed the Registrar are now under consideration. The local Government agree that deputation to study the co-operative movement in Europe is desirable both for the Registrars and the officers under training to succeed them. **Central Provinces.**—The policy enunciated in the Report is followed in the selection of the Registrar with due regard to the exigencies of service.
89. Appointment of a whole-time Registrar in the Central Provinces (paragraph 376).	**Central Provinces.**—The question is under consideration.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
90. Training of Co-operative staff (paragraph 377).	**Madras.**—*Vide* remarks against item 86. **Bombay.**—Proposals regarding the extension of the present system of requiring auditors to pass an examination in co-operative accountancy and the deputation of inspectors from Provincial and District Central Banks to examine the working of co-operative societies, are under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—The Registrar has visited the Punjab and inspected the system of training there. An educational inspector from the Punjab Co-operative Department was on deputation in this Province for some time in 1927 to teach in the local training class for supervisors. The local Government also sent some staff to the Punjab for training. A proposal is now under consideration to lengthen the period of the training class to one year and to widen the curriculum on the Punjab model. The pay of certain classes of auditors has been raised this year with the object of recruiting men with a training in accountancy. After recruitment their departmental training will be arranged for by the Registrar. (See also item 86 above.) **Punjab.**—The Royal Commission made favourable mention of the method of building up and training a co-operative staff as practised in the Punjab. The recent Conference of Registrars also regarded it with favour. The same methods are still being followed and attempts are continually being made to improve them. **Burma.**—The report of the Committee on Co-operation is being examined. In Burma, the supervision of co-operative societies is not done by the bank and is under separate control from financing. **Bihar and Orissa.**—The last Congress of the Bihar and Orissa Co-operative Federation recommended the establishment of an institute for the training of the staff of the Co-operative Deparment and a training school for Orissa. All societies and Central Banks have agreed to a levy of nine pies per cent. on their working capital for the purpose. They have further resolved that Government should be asked to contribute an equal amount. The cost of the Institute and the school will be not less than Rs. 40,000 a year and the Registrar of Co-operative Societies recommends that half may be paid by Government. This recommendation is now under the consideration of Government. **Central Provinces.**—Annual training classes are helf for (1) Government staff by the Registrar, and (2) Co-operative Bank and Societies staff and their members by the Divisional Co-operative Institutes. In addition, annual refresher courses are held for the Government and superior staff of the banks.
91. Government aid to specialised forms of co-operative activity (paragraph 378).	**Bombay.**—The question is under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—The local Government accept the general principle but the past year has not been favourable for the incurring of much new expenditure of any kind. Grants sanctioned this year include Rs. 600 for consolidation of holdings, Rs. 1,200 for supervision of the Industrial Co-operative Bank, Rs. 5,000 for adult education and Rs. 5,610 for the publication of co-operative journals in English and the vernacular. **Punjab.**—*Vide* remarks against item No. 92 below. **Burma.**—Proposals for assistance to the forms of co-operative activity mentioned will be considered on their merits when they are brought forward. The principle of general assistance is not accepted.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—The Royal Commission recommend that Government should give liberal assistance in the early stages to the more specialised forms of co-operative activity such as consolidation of holdings, adult education, irrigation and the like. This has been accepted. The help necessary from Government for the present will be a loan at a cheap rate of interest, say 5 per cent. for financing irrigation societies and the Registrar of Co-operative Societies estimates that for the next three years the requirements in this direction will be a loan of about Rs. 50,000 a year. He has also asked for two special officers each on Rs. 100 with travelling allowance at the rate of Rs. 50 and a peon on Rs. 10 a month to organise irrigation societies in the districts of Sambalpur and Manbhum for a period of three years. The proposal is now under consideration. **Central Provinces.**—Government aid is given for propaganda work.
92. Government expenditure on Education and Audit (paragraph 378).	**Bombay.**—The question is under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—In this province, the Government have been forced to bear a considerable proportion of the cost of audit in order to secure efficiency. The primary societies cannot at present pay higher fees. The Government do not accept this principle at the present time, as in their view strict and efficient audit is essential if the movement in the province is to be re-organised on a sound basis. **Punjab.**—In 1927-28, Government aid was given to the extent of Rs. 1·68 lakhs. In 1928-29 it amounted to Rs. 1·83 lakhs. In addition to all this, Government give grants to meet the cost of *Mukaddams* attached to better farming societies and grants-in-aid to adult education societies. The financing of co-operative mortgage banks is done now-a-days almost entirely by loans from Government. **Burma.**—The principle is accepted. **Bihar and Orissa.**—The Government at present pay about Rs. 70,000 towards the cost of audit. If they can be relieved of this contribution, they will have enough to spare for the educational and propaganda side of the co-operative movement. They, therefore, propose to get this question examined by the Committee on Co-operation, the appointment of which is now under consideration, before arriving at a definite decision. **Central Provinces.**—Liberal financial assistance is given by the Government to the co-operative institutes for education and audit.
93. Concessions to Co-operative Societies (paragraph 379).	**Bombay.**—The question of granting concessions regarding remittance of funds to co-operative societies is under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—During the past year primary societies have been granted exemption from district board taxation on circumstances and property. The use of remittance transfer receipts for sums over Rs. 150 between societies and between a society and the Imperial Bank, is now allowed and encouraged. No other action has yet been taken. **Punjab.**—In the last year, no new concessions were granted to Co-operative Societies. The concessions already made by Government are on a generous scale. **Burma.**—This recommendation is already sufficiently complied with in Burma.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—Government have sanctioned the refund to co-operative societies of two-thirds of the commission on postal money orders employed for remittance between societies and facilities have been given to Central Banks to open accounts with certain sub-treasuries. The Registrar of Co-operative Societies is making enquiries regarding all the concessions which the co-operative societies in other provinces enjoy and will address Government further if necessary. **Central Provinces.**—The concessions include remittance of societies' funds from district treasury to a sub-treasury and between sub-treasuries by the issue of cash orders and the decisions and awards of the Registrar of Co-operative Societies or of Arbitrators are enforced like civil court decrees. The dues from members of societies under liquidation are recovered as arrears of land revenue. Inspection of revenue records is allowed and copies are granted free. Proposals to make awards recoverable as arrears of land revenue are under the consideration of Government.
94. Attitude of officials to Co-operative Movement (paragraph 380).	**Bengal.**—*Vide* remarks against item 85. **United Provinces.**—The policy recommended by the Royal Commission has long been the policy of this Government. **Punjab.**—Help and sympathy is continually received from the Agricultural and Educational Departments and the Co-operative Department does its best to give them in return any help that they may require. Among District Officers there is still a good deal to be desired in the state of their knowledge of the principal aims and objects of co-operation, and also of the practical methods of carrying out and attaining these, and also of the organisation and methods of the Co-operative Department. **Burma.**—The attitude of Government is sufficiently well understood by officers. No special action is required. **Bihar and Orissa.**—The recommendation is accepted. **Central Provinces.**—District and subdivisional officers inspect societies and attend rallies and render valuable general help to the movement.
95. Land Mortgage Banks (paragraphs 381-384).	**Madras.**—There are about 20 banks and, with the exception of a few, they have not done any material amount of work chiefly on account of the difficulty in selling debentures locally. To overcome this difficulty, the Government have sanctioned the opening of a central land mortgage bank at Madras to float debentures on the security of mortgages assigned to it by the Primary Banks and to finance the latter out of the proceeds of such debentures. The Government have undertaken to guarantee interest on debentures up to Rs. 50 lakhs issued by the Central Bank during the first five years till they are repaid. In connection with this the Government have also provided for the appointment of two Deputy Registrars on Rs. 300 per mensem and ten officers of the grade of Sub-Deputy Registrars at a cost of Rs. 42,360 per annum. **Bombay.**—Proposals for the continuance of the policy of organising land mortgage banks and utilization of their agency for the distribution of loans under the Land Improvements Loans Act, are under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—The Provincial Banking Inquiry Committee will commence its inquiries in the winter of 1929 and will include in its inquiries :— (1) the scope for the establishment of land mortgage banks and for agricultural credit banks, (2) the question of agricultural indebtedness, (3) the establishment of a provincial co-operative bank. The result of its inquiries will be awaited.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Punjab.—The number of mortgage banks remains the same as it was last year. They are now-a-days financed by loans from Government and their business is slowly increasing. **Burma.**—The subject is being dealt with in Burma. Consideration of the Burma National Co-operative Mortgage Bill is being deferred for the present and the local Government have sanctioned the opening of two mortgage banks in Lower Burma to be worked under the Burma Co-operative Societies Act, VI of 1927. **Bihar and Orissa.**—The local Government propose to await the report of the Provincial Banking Enquiry Committee, which will investigate among other things the scope for land mortgage banks. **Central Provinces.**—The report of the Sub-Committee appointed by the Berar Co-operative Institute to investigate the question will shortly be taken into consideration. **North-West Frontier Province.**—Considers that such banks should be started in areas where the village bank is well established but would defer action for the present. **Baluchistan.**—Considers such banks to be superfluous to the social, agricultural and economic needs of the province. **Delhi.**—Considers that a system of co-operative mortgage credit will not be successful until the ordinary system of co-operative credit is more firmly established.
96. Single *versus* Multiple Purpose Societies (paragraph 385).	**Bengal.**—*Vide* remarks against item 85. **United Provinces.**—The principle is accepted. Almost all the existing societies are single purpose societies. **Punjab.**—The single purpose society is still the general rule. **Burma.**—The opinion has been noted. The subject is controversial and has little practical importance at present in Burma. **Bihar and Orissa.**—In Bihar and Orissa, co-operative societies for a single purpose are given preference to multiple purpose societies. **Central Provinces.**—Only one multiple society exists which includes in its objects the grant of credit and joint purchase and the sale of articles required by members and those produced by them.
97. Encouragement of Co-operative Purchase and Sale (paragraph 387).	**Bengal.**—*Vide* remarks against item 85. **United Provinces.**—Purchase and sale and industrial co-operative societies have so far had little or no success in this province. Effort in these directions is at present, therefore, being subordinated to work in rural credit and rural reconstruction societies and for adult education. **Punjab.**—Mention has already been made of the co-operative commission shops (Item 68). **Burma.**—The opinion and recommendation have been accepted. **Bihar and Orissa.**—At present, there are no big co-operative sale societies in the province and it is, therefore, premature to induce large buyers to render any help. The recommendation for giving intensive education in the advantages of such societies will be considered when the financial conditions permit of the additional expenditure of Rs. 20,000 involved being incurred. **Central Provinces.**—Two such societies are in existence for the convenience of weavers requiring raw materials and facility for the disposal of their finished articles.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
98. Expert advice to Co-operative Societies (paragraph 388).	**Madras.**—The Agricultural Advisory Committee have recommended that an officer of the grade of Deputy Director of Agriculture may be lent to the Co-operative Department for a period of two years as an experimental measure, that his activities should be confined to cotton in the first instance and that at the end of the period a full report on both the agricultural side of his activities and on the problem of marketing should be submitted to the Committee. The matter is under the consideration of Government. The cost of the Deputy Director and his staff is estimated at about Rs. 10,000 per annum. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—Three inspectors of industrial societies [(1) textiles, (2) industrial and artizans, (3) cottage industries have recently been appointed and the results of their work are awaited. A lady inspector has also been appointed. **Punjab.**—The help and advice of the Agricultural, Public Health and Veterinary Departments are always very readily put at the disposal of the Co-operative Department. In addition to this, since last October, the Co-operative Department has had a Financial Advisor who has many years experience of joint-stock banking. **Burma.**—The recommendation is accepted. **Bihar and Orissa.**—The Co-operative Department gets all possible help from the Agricultural and the Civil Veterinary Departments. The Irrigation Department is always to ready to examine irrigation projects and advise thereon, though at present it is not in a position to lend the services of an Irrigation Officer to irrigation societies. **Central Provinces.**—No necessity for this has arisen.
99. Appointment of agricultural officers to work under Registrars of Co-operative Societies (paragraph 388).	**Bengal.**—*Vide* remarks against item 85. **United Provinces.**—The Government have decided that for the present men of a lower status are more needed than a deputy director. An inspector for agricultural propaganda has been obtained this year from the Subordinate Agricultural Service. One other inspector is a graduate in agriculture of an English University and a system of a sending co-operative inspectors under training for a special short course at the Agricultural College, Cawnpore, is in operation. **Punjab.**—The only agricultural officers working under the Co-operative Department are the *mukaddams* attached to the better farming societies. **Burma.**—No officer can be spared for this purpose and the recommendation does not require further examination at present. **Bihar and Orissa.**—There is sufficient co-ordination between the Co-operative and Agricultural Departments and it is not necessary at present to appoint an officer of the Agricultural Department to serve under the Registrar of Co-operative Societies. **Central Provinces.**—Agricultural assistants are deputed to supervise cotton *adat* shops in Berar and for propaganda among the members of co-operative societies.
100. Encouragement of Official and Honorary Workers to study Co-operative Developments in other Provinces (paragraph 389).	**Bombay.**—The question is under consideration. **Bengal.**—*Vide* remarks against item 85. **United Provinces.**—The Registrar, Co-operative Societies, estimates a cost of Rs. 1,500 per annum or so if three or four men are sent. No action has been taken yet owing to lack of available funds. **Punjab.**—A little over a year ago an Assistant Registrar was sent to Bengal in order that he might study the working of the co-operative societies for milk supply in Calcutta. In the summer of 1928, another Assistant Registrar went on deputation for a six months tour of various European countries in order to study the development and working of co-operation there.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Burma.—The recommendation is accepted. **Bihar and Orissa.**—The recommendation has been accepted and the question of funds will be considered on its merits in each individual case. **Central Provinces.**—Six auditors were trained in the Punjab during the year 1925-28.
CHAPTER XIV.—The Village.	
101. Medical aid (paragraphs 401-404).	**United Provinces.**—A district public health organization in this province similar to that described in paragraph 401 of the Royal Commission's report now extends to 27 districts and proposals for extending it to the remaining 21 districts are ready at a cost of over Rs. 4 lakhs. In this province, in addition to the staff provided for this purpose in Madras, one or more Assistant Medical Officers of Health and one or more travelling dispensaries have been provided in each district under the District Medical Officers of Health and further exapansion is contemplated as indicated above. The chief recommendation of the Commission relating to this department is the expansion of the rural health service (paragraph 413 of the report). Proposals have already been formulated for the gradual expansion of the district health service in three successive stages. In order to create a " sanitary conscience " among the masses, the Public Health Department has been conducting intensive propaganda on health subjects in the rural areas by means of lantern lectures, leaflets, " ocular " demonstration, etc. A comprehensive programme for increasing the number of dispensaries in rural areas is in operation. A " village aid scheme " has also been started in certain selected area. Inspectors of the Co-operative Department now receive some training in hygiene, first aid, and the use of elementary medicines and are encouraged to start village aid centres. They carry some medicines and distribute them where necessary. They also try and educate villagers in sanitation. Selected " better living " societies have been provided with medicine chests to enable them to render first aid. Another scheme for utilising the agency of village school teachers, mainly for the treatment of scholars, was started in the Sitapur Division by supplying them with certain simple medicines. The results were encouraging and proposals for extending the scheme are under consideration. Furtherance of maternity and child-welfare work in the rural areas is already an important part of the duties of the District Medical Officers of Health. Trained midwives are being provided in urban and town areas. There is also a scheme for the training of village midwives, by the example of the former. So far as the regulation of the practice of unqualified *dais* (midwife) is concerned, bye-laws for the purpose can be framed under the United Provinces District Board Act. It is considered that it is too early yet to apply these regulations in the rural areas. **Burma.**—The recommendation regarding the Madras District Health Scheme has been brought to the notice of the Government Department concerned which is now dealing with a proposal for the organization of the Public Health Service in Burma. The principles embodied in the Bombay village medical aid scheme have been referred to the Ministry of Education. A scheme for subsidising medical practitioners to settle in small towns and villages has been already set on foot by the local Government.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—The Royal Commission consider that substantial progress in the campaign against malaria can only be achieved by concerted action by the people themselves assisted by guidance and within limits, by finance, from Government. The truth of the proposition is accepted. But expert staff for making surveys and money to carry out their recommendations are required for successfully tackling the problem of malaria. In view of the limited resources of the province, it is not practicable to take up any such scheme in the near future. The scheme for subsidising medical practitioners to settle in small towns has already been brought to the notice of the district boards by Government, and many boards tried it. It failed in all cases either because suitable doctors were not available or because it did not pay the doctors. Conditions in this province are not yet ripe for a successful scheme on these lines. The suggestion to recommend it again to local bodies is therefore not acceptable to Government. **Central Provinces.**—A scheme for the training of village physicians is under consideration and a scheme for the grant of subsidies to private medical practitioners for settling in important villages in the interior has been brought into force. **North-West Frontier Province.**—The existing dispensaries maintained by District Boards are so understaffed and badly equipped that the Chief Medical Officer considers it useless to open new dispensaries, unless the present institutions are markedly improved. The District Board finances are too poor to allow any additional expenditure. The question of increased grants-in-aid to those bodies is under consideration. The progress for giving better facilities in respect of medical aid will be slow until more funds are provided by Government. Free supply of quinine is issued annually for distribution among the poorer classes in the village as a prevention against malaria.
102. Improvement of Water-supply (paragraph 406).	**Bengal.**—The local Government assist by making grants of Rs. 2½ lakhs a year for the improvement of water supply in rural areas. A scheme for offering loans to District Boards, which will put forward sound schemes for water supply is under consideration. Union Boards have been established thereby enabling the villagers to tax themselves in order to take sanitary measures, e.g., improvement of local water supply. **United Provinces.**—The importance of this subject has all along been recognised. Assistance for the construction of wells has been given by the Board of Public Health since its inception but the co-operation of the District Boards has not been as ready as the importance of the subject warrants. The problem is so huge that progress has been very slow. Grants by the Board of Public Health are now made for wells only in those cases where an equal amount is forthcoming from the villagers as in this way the resources are doubled. The District Boards Finance Committee which is dealing with sanitary works in general is expected to provide some satisfactory solution of this important problem. The recent amendment of the United Provinces Village Sanitation Act, which was passed this year, makes the District Boards the authority in sole control of arrangements for the improvement of the water supply in rural areas. A few co-operative societies have taken steps to construct or improve wells especially for depressed classes and village *panchayats* often spend a portion of their income from fines in this way. The Co-operative District Organizations have mostly spent any funds allotted for sanitary works on improving drinking water supplies.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Burma.—The recommendation is accepted. **Bihar and Orissa.**—Government have for some years given active effect to this proposition by making extensive grants for water supply to local bodies. No fresh action is, therefore, required. **Central Provinces.**—Liberal grants are made to the District Councils for this purpose. **North-West Frontier Province.**—Water supply schemes in rural areas involving an expenditure of Rs. 5,10,000 are under consideration.
103. Addition of fish to cultivator's diet (paragraph 415).	**Madras.**—The Director of Fisheries reports that there is plenty of scope for rural pisciculture and that considerable work has already been done in that direction. He has submitted a scheme to initiate rural pisciculture for which he requires a staff costing about Rs. 10,000 per annum. On the advice of the Agricultural Advisory committee, the matter is now under the consideration of the Government. **Bengal.**—The question is under consideration. **United Provinces.**—A comprehensive investigation of the question of fish supply was made by an officer on special duty in 1923, with a view to extending its use as an article of diet but without much result. The Public Health Department urge that propaganda should be conducted to educate owners of tanks and *jhils* and fishermen. That department is interested both from the point of view of diet and of destruction of mosquito larvae by fish. The Hygiene Publicity Bureau is emphasising the advantage of a fish diet. Model laws was prohibiting fishing with nets of a mesh smaller than 1″, so as to leave the larvae eating fish, have been recently framed and Government are trying to get District Boards to introduce these in certain selected areas. Proposals for fish conservation in certain hill streams are also under consideration. **Burma.**—This recommendation does not apply to Burma where fish is a popular diet of the people. The recommendation in the test of paragraph 415 that the investigation of the fishery settlement and development officer should include an examination of the case for a properly organised fishery department has been brought to the notice of the Revenue Department with a view to instructing the officer who is under that Department. **Bihar and Orissa.**—The scope for the development of fisheries is considerable. The local Government maintain a carp breeding farm at Ghatsila, which is being gradually extended. Another experimental fry distribution centre has been recently opened at Bankipore and it is contemplated to stock some of the Son Canals with fish fry from this centre. The Chilka lake fisheries are being exploited by the Department of Fisheries in conjunction with the Co-operative Department. Two ice factories have been recently started by private enterprise which supply ice for ice packing. The local Government are doing all that they can to further the growth of the Fishery Department with the limited funds at their disposal. Other and more urgent demands, however, preclude the possibility of any considerable increase in the staff of this Department in the near future. **Central Provinces.**—No action is required in this province. **North-West Frontier Province.**—Fish is not a staple food in the province. The inhabitants are largely meat eaters. There is no Department controlling inland fisheries.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
104. Research into Problems of Human Nutrition (paragraph 417).	**United Provinces.**—The results of the researches into the relative values of Indian foods, which were being conducted by Colonel McCarrison have only just been published. The officers of this department will bring the necessary facts (including the value of fish as an article of diet) to the notice of the rural masses and school children in the course of their publicity work. No special organization or funds are needed for this. The Director of Public Health is of opinion that a subsidiary enquiry on human nutrition is not necessary in this Province as Colonel McCarrison's work adequately deals with the foods used in the United Provinces. It is proposed to bring out a pamphlet on human nutrition to explain some present faults and deficiencies. **Burma.**—This recommendation has been brought to the notice of the Ministry of Public Health. **Bihar and Orissa.**—Research work into problems of human nutrition is a special subject requiring specially trained men. The Government of Bihar and Orissa understand that this work is being carried on in a special laboratory at Conoor in Madras. Before any attempt is made to start independent research in other provinces, the matter should be discussed by Directors of Public Health and others interested in the subject at a Conference which would discuss among other matters the results of research hitherto reached, the best way to disseminate information about what has been done, and whether separate research work on this subject in the different provinces is advisable or whether research should be concentrated in one place for all India. This Government have recently accepted a suggestion received from the Government of India that there should be an annual conference of Directors of Public Health and others on subjects affecting public health and the above subject can conveniently be discussed at such a conference. **Central Provinces.**—No action has yet been taken. **North-West Frontier Province.**—The province being small and not self-supporting it is not possible to c rry out any valuable research. Although adulteration of ood is carried on to a large extent in the towns, there is prac ica ly none in the rural areas, where the nutrition is generally good. No steps are, therefore, considered necessary for the time being in this direction. The Adulteration of Food Act has been enforced in the towns and Notified Area Committees of Nowshera and Baffa.
105. Co-operative effort to improve amenities of Village Life with special reference to Uplift Compaigns and Rural Community Movements (paragraphs 421-424 and 429).	**Bengal.**—These recommendations are awaiting final consideration pending the consideration of the recommendations made by the Tenth Conference of Registrars of Co-operative Societies held in 1928. **United Provinces.**—All propaganda is at present directed to kindle the spirit of " self-help " among the villagers. To educate the villagers, labour gangs, which form part of the district health service, are employed for larger and more difficult sanitary works, and for petty and simpler works district medical officers of health are instructed to enlist the services of villagers in the non-sowing season. The progress has not been rapid. It is hoped to arrange for some elementary training for *patwaris* in hygiene, etc., in the *patwari* schools and for refresher courses for men already in service. Village *chaukidars* and *thana muharrirs* are given occasional lectures by District Medical Officers on the symptoms of common diseases and the provisions of the epidemic rules and there has been some slight improvement in their work. The village guide scheme has been started in the Benares and Partabgarh districts as part of the scheme of rural reconstruction, which seeks to improve the social, moral and physical condition of the villagers and to make

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	their life more pleasant and liberal. The work of the Co-operative Department in the work of rural reconstruction is chiefly confined to the three districts of Benares, Lucknow and Partabgarh. At present the work is being carried on in twelve villages but it is proposed to extend it in other villages. Village aid centres to improve the sanitation of villages have been started in 146 centres by the Co-operative and Public Health Departments. Among other things each village selected has a small dispensary for the administration of first aid. **Punjab.**—It is hoped that the efforts of co-operation generally and of the various kinds of teaching imparted by the field staff to members of societies, will include also a general improvement in the conditions of village life. In addition to this, propaganda work is being continued as also the registration of new Better-living Societies; in many cases, the results of these societies have been very encouraging. **Burma.**—The Government have undertaken to treat applications for extension of village sites with liberality, and the provision of playing fields has already been engaging the attention of the Ministry of Education. The opinions regarding village uplift compaign, etc., are accepted. The Public Health Department hopes to make an intensive experiment of this nature and negotiations are being undertaken with the International Health Board of the Rockfeller Foundation. The opinions regarding the rural community movement are accepted. There is no obstacle to the employment of women teachers in village schools in Burma. The opinion regarding women's institutes is accepted. No action is required. **Bihar and Orissa.**—The conclusions arrived at by the Royal Commission are being brought to the notice of the officers concerned. **Central Provinces.**—A scheme of rural uplift is under consideration. **Delhi.**—A definite Public Health scheme has been worked out. It will be put into operation as soon as funds are available. In the meanwhile work has been started on a small scale as an experimental measure. The Public Health Staff works in the closest co-operation with the Educational, Agricultural, Co-operative Banking, Industrial, Veterinary and other activities of the province.
106. Assistance from Universities in work of Rural Development (paragraph 426).	**Bengal.**—The attention of the two universities in Bengal has been drawn to this recommendation for such action as they may consider necessary. **United Provinces.**—No progress has been reported except in the way of economic studies and theses. **Burma.**—The opinion is accepted. **Bihar and Orissa.**—The recommendation is being brought to the notice of the Patna University. **Central Provinces.**—No action has yet been taken.
107. Establishment of Bureaux of Rural Economic Research (paragraph 427).	**Bengal.**—The question is under consideration. **United Provinces.**—A detailed scheme has been prepared and awaits the provision of funds (vide item 141 below). **Punjab.**—An appointment of Professor of Rural Economics has been made and it is hoped that this will lead to the formation of a Bureau of Rural Economics. **Burma.**—The opinion is accepted.

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	Bihar and Orissa.—The establishment of such a Bureau will involve substantial expenditure and a serious start cannot be made with less than Rs. 25,000 a year. Desirable as it is to get accurate information as to the economic condition of the people of the Province, it is more urgent to take those measures which will help to raise their economic condition. The recommendation has, therefore, been reserved for future consideration. **Central Provinces.**—No action has yet been taken. **North-West Frontier Province.**—Nothing has yet or can be done till funds are provided and men are available for a Board of Economic Enquiry such as exists in the Punjab.
108. Settlement of Village Disputes by Local Arbitrators (paragraph 431).	**United Provinces.**—No particular progress with arbitration societies is reported. The past year has seen no expansion in the the number of *panchayats* constituted under the United Provinces Village Panchayat Act. That movement still seems to depend more on official stimulus from outside than on natural vitality. The *panchayats* undoubtedly deal with a large number of petty cases but some observers think that their existence makes no reduction in the number of more serious cases brought to the regular courts but merely gives an opportunity for litigation which would otherwise not be litigation at all. They are used a good deal by money-lenders for the collection of small debts. In general they take their judicial functions much more seriously than their executive powers in connection with sanitation and village improvement. At the end of the last quarter there were 5,043 in the Province. **Burma.**—Village committees had been constituted under the Burma Village Act, 1907, and the same committees may be given powers under the Burma Rural Self-Government Act, 1921. **Bihar and Orissa.**—A Village Administration Act under which *panchayats* can be appointed with powers to decide minor criminal and civil cases is already in force in Bihar and Orissa and experiments under it are being tried. It will probably be more widely extended as the education of the village in local self-government advances and some revenue officers are under special training for supervising this measure. **Central Provinces.**—Village Courts and Village Benches dispense justice in villages under the Village Panchayat Act.
CHAPTER XV. Education. 109. Female Education (paragraph 444).	**Bengal.**—The possibility of carrying out a special investigation to provide materials for estimating the influence of female literacy on the spread of general literacy is under consideration. **United Provinces.**—In 1927-28, there were 85,000 pupils in all institutions as against 80,000 of the previous year. The demand for female education in urban areas is growing fast. In the words of the Chief Inspectress of Girls' Schools, "It has made itself felt within the last year or two, and it seems probable that within the next few years, it will prove necessary to have an Anglo-vernacular school in every town of any size. The cause for this development seems to be the recognition of the value of some knowledge of English for social life. The educational qualifications of the bride is an important factor in marriage arrangements among a certain class and this consideration has much influence on the nature of girls" up-bringing. A resolution was moved in the Legislative Council in June, 1929, and accepted by the Government that there should be an Anglo-middle school at the headquarters of every district and that Government should help in the consummation of this object by starting schools or helping district boards, municipal boards or private bodies to do the same where no such schools exist. The lower classes are as apathetic towards female education in urban areas as the agriculturists in rural areas. Good effects are expected to

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	follow, however, from the promising results that have attended the introduction of adult education amongst women. A lady Inspector of Co-operative Societies formed for the purpose of "better-living" has been appointed and where the Co-operative Department has been able to influence grown-up ladies, the result has been noticeable at once in the larger and more regular attendance of girls in existing girls' schools or in the boys' schools. It will be the policy of Government to attack the problem from both sides, *viz.*, by carrying on an intensive propaganda in favour of female education, by starting more girls' schools and bringing into being more adult education societies so as to imbue the parents with a desire to see their daughters literate. The province is very backward in female education. Social customs have been responsible for the backwardness no less than the predominantly rural character of the population. Among the rural masses, as always, the claims of education have remained more or less in the background. **Burma.**—Opinion regarding the effect of literacy among women on rural development is approved. The Director of Public Instruction advises that special research as to the influence of female education is spreading lasting literacy need not be undertaken. **Bihar and Orissa.**—This recommendation has been accepted in principle and necessary investigation is being made in the district of Ranchi where, owing to missionary enterprise, there are many literate women among the cultivating classes. A report on the investigation is being awaited. **Central Provinces.**—Action is being taken on the recommendations of the Female Education Committee's report. **North-West Frontier Province.**—Female education is steadily becoming more popular and more money is being spent thereon. There has been an increase in the last year of about 14 per cent. in the number of girls at school.
110. Introduction of Compulsory Primary Education (paragraph 445).	**Bengal.**—These recommendations will be considered by District School Boards when they are constituted under the Bengal (Rural) Primary Education Bill, which was introduced in the September (1929) session of the provincial Legislative Council and was referred to a Select Committee for consideration. **United Provinces.**—In the United Provinces, the Primary Education Act, 1919, and the Primary Education (District Boards) Act of 1926, permit municipal and district boards, with the approval of the Government, to apply compulsion in all or part of the areas under their jurisdiction. In 35 out of 85 municipalities, and 24 of the 48 district boards, primary education of boys has been made compulsory in certain selected areas. The recurring cost in municipalities is about Rs. 2·9 lakhs and in the district boards Rs. 3·68 lakhs. A more rapid expansion is hindered by the financial difficulties both of the local Government and of the local bodies. At the same time effort is being made to push an adult education. It has been found by experience that the fathers whose intellectual curiosity has been whetted by attendance at these classes have shown greater readiness to allow their children to attend school and to allow the regular school-goers—both boys and girls—to remain longer at school. This is an indirect aid which has not been lost sight of in order to secure effective literacy, and Government consider that it is as much in creating a desire for education in the grown-ups as in the introduction of compulsory acts that the successful introduction of compulsion in education can be hoped for. **Burma.**—The Director of Public Instruction advises and the Government agree that compulsory education is not the only remedy and that better teachers and other remedies should contribute as pointed out in paragraph 447 of the Report. There are special difficulties in Burma due to the monastic system.

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	The Government agree that some form of compulsory education should be introduced. These recommendations have been brought to the notice of the Ministry of Education.
	Bihar and Orissa—Compulsion is not at present financially practicable. It has been estimated that the cost of introducing free and compulsory primary education would amount to Rs. 2 crores recurring and Rs. 5 crores non-recurring. Primary education programmes were prepared for all the local bodies in the province in 1925-26 and the cost of making education free, but not compulsory, for 8 % of the population on a voluntary basis was calculated at Rs. 98 lakhs recurring and Rs. 322 lakhs non-recuring.
	Central Provinces.—Action has already been taken and compulsion is being extended to the areas for which schemes have been sanctioned.
	North-West Frontier Province.—This point will be examined in the near future by the Committee appointed by the Government of India for the purpose.
	Delhi.—The Compulsory Primary Education Act has been applied to four out of 300 villages.
111. Formation of Co-operative Education Societies (paragraph 446).	**Bengal.**—Government are of opinion that, in the field of *zenana* education or of elementary education of girls, co-operative societies might possibly help a great deal on the lines of those formed in the Punjab. It is now being considered to what extent it is possible for the Co-operative and Education Departments to work conjointly in the matter.
	United Provinces.—Co-operative education societies to secure the attendance of children have not yet been tried. Co-operative societies for adult education are described elsewhere.
	Punjab.—It must be confessed that, on the whole, co-operative societies for adult education have not been a success. The condition of compulsory and girls' education societies is fortunately much better.
	Burma.—The recommendation is accepted. The Co-operative Department is not at present in a position to take up this additional activity.
	Bihar and Orissa.—The recommendation for the formation of co-operative education societies on the Punjab system has been accepted. The Registrar of Co-operative Societies is taking steps to organise one such society in Muzaffarpur town and a few in some villages.
	Central Provinces.—No action has yet been taken.
	North-West Frontier Province.—No steps have yet been taken. Co-operative credit generally is too young a plant in the province to allow of such a development at this early stage.
112. Improvement of Primary Education (paragraphs 447-448).	**Bengal.**—Vide remarks against item 110 above.
	United Provinces.—The training of teachers for primary schools is undertaken by eight Government normal schools, six Government central training schools, 57 district board training schools and eight municipal board training schools. District board training schools which have proved satisfactory and are likely to form a permanent part of the educational system have been and are being helped by the local Government to improve. An additional master, called a master of method, has been added and the buildings enlarged. Proposals to open more Government central training schools and two more Government normal schools are under consideration. Lack of funds stands in the way of more rapid improvement and extension of the means of training teachers; but it is hoped ultimately to have at least one Government training school for primary school masters in each district. Special attention is being paid to the training of teachers for work in infant and preparatory classes. New methods are being taught and the headmasters of primary schools are now themselves required to

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	teach the infant sections. A sum of Rs. 9,38,556 was distributed during the last three years from provincial revenues to district boards for primary school buildings, while Rs. 70,00,000 approximately are still required for buildings for existing primary schools. The distribution and staffing of primary schools in rural areas in the United Provinces has been criticised. The present distribution and staffing is largely due to local and historical causes and difficulties of the terrain. Inspectors have been required to pay special attention during their annual tours in the interior to improving the distribution of schools in the district in their jurisdiction; and it is hoped by careful mapping of the districts by sub-deputy inspectors and by pressure from the department on local bodies to effect improvement. Some district boards have already taken steps in this direction. The district board education rules enjoin on boards the maintenance of a full primary school within accessible distance of every village as soon as resources permit. They also provide that in the appointment of teachers preference is to be given to a resident of the town or village in which the school is situated. In selecting students for admission to the normal or training schools, preference is given to those boys who pass the vernacular final examination with agriculture as an optional subject. The question of text-books for primary schools is receiving attention. In particular, instructions for the guidance of authors and publishers in the preparation of new common language readers are being drafted. Arithmetic books of different type for use in rural and urban areas have already been adopted. An Indian Educational Service officer has been placed on special duty for the preparation, for middle vernacular schools, of readers containing general knowledge lessons suited to rural areas. It is from these schools that the teachers in primary schools are recruited and by interesting the boys in middle schools in rural knowledge it is expected that a closer adaptation to rural conditions of the teaching in primary schools will result. The reorganization of the Text-Book Committee has been undertaken and the work of recommending text-books for use in vernacular schools will now form part of the work of the Board of Vernacular Education. The training of teachers in rural activities and the closer adaptation of primary schools to the needs of the countryside is being undertaken and experimented with in various places. Aid from provincial revenues is being given in two cases. In the Benares district, a Rural Re-construction Association has been formed which with assistance from provincial and local revenues is training teachers and others to become village guides and teachers in adult rural schools. **Burma.**—The improvement in the training of teachers is being attended to by the Education Department. As regards organisation of primary schools, the example of the Punjab in so far as it consists in merely altering the nomenclature of classes is not considered suitable to be followed in Burma. As regards "central" schools, the Education Department is in favour of small middle departments being concentrated wherever possible. Teachers are recruited from men of rural origin and upbringing. The opinion regarding Text-Book Committees is accepted. As regards the opinion that agriculture should not be taught to boys in primary schools, it is accepted provided that it is not intended to discourage nature study in school gardens. **Bihar and Orissa.**—A scheme for improving the training of teachers in elementary training schools, costing Rs. 3,73,000 recurring and Rs. 10,01,000 non-recurring has been prepared and approved. It will be taken up for necessary action as soon as funds as available.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Government are awaiting the report of the Education Committee of the Indian Statutory Commission before arriving at a decision on the recommendation for establishing "central schools" and conversion of "single teacher schools" into "branch schools." The question of the desirability converting primary schools into lower middle schools, as in the Punjab, is under consideration. In this province, the majority of teachers of primary schools are of rural origin. The Bihar and Orissa Text-Book Committee was reconstituted in December, 1923, and again in November, 1925. It is not proposed to revise its constitution but in making nominations to it care will be taken to nominate a number of persons with special knowledge of the needs of village schools. The question whether the Text-Book Committee should continue to confine itself to the examination of books submitted for approval or should undertake the responsibility of itself securing the supply of the right class of text-books, as the Royal Commission suggest, is under consideration. A sum of Rs. 250 will be given to the Text Book Committee in the first instance to give rewards for the production of suitable text-books. The recommendation that agriculture like other vocational subjects should not be taught at the primary stage accords with the recommendation of the local Vocational Educational Committee and no further action is required on it. **Central Provinces.**—Appreciable progress has been made in the direction of improving the efficiency of teaching and the matter relating to the establishment of central schools and conversion of "single teacher schools" into "branch schools" in under consideration. The opening of Vernacular Middle Schools is in progress. No action has been taken to teach agriculture in primary schools. **North-West Frontier Province.**—The curriculum for primary schools was overhauled fairly recently. Efforts to improve the quality of teachers are continuous. Similarly, propaganda is carried on to persuade parents to keep their children at school for the full four years of the primary course. **Delhi.**—(*a*) The number of primary schools and primary departments in the rural area is 98, four of which were opened in the year 1928-29. (*b*) The total population in the rural area is 183,768, out of which at the rate of 7 per cent. there should be 12,864 boys of school-going age. At present about 6,000 are receiving instruction i.e., 1,000 more than last year. (*c*) Five flourishing primary schools were raised to Lower Middle. (*d*) Seven primary school houses, five aditional rooms and one full middle school building were put up.
113. Adult Education (paragraph 419).	**Madras.**—The Agricultural Advisory Committee have observed that the policy of advancing adult education has already been accepted by the local Government but that there were financial limitations in the way of carrying it out. The use of cinematographs in connection with adult education was considered desirable but not essential. **Bengal.**—The Director of Public Instruction has been requested to submit a scheme for the improvement of adult education in the province. His report is awaited. **United Provinces.**—Adult education is receiving attention Night schools for adults have been opened with Government assistance in six municipalities and proposals for opening more are awaiting the provision of funds. In 1927-28, the total number of pupils enrolled in such schools was 8,613 (included 42 females) and the expenditure was Rs. 35,884, of which Rs. 20,580 was from Government funds. Adult education co-operative societies in rural areas are being encouraged by Government grants to start night schools

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	for adults. Thirty-one such schools are open, chiefly in the districts of Benares, Partabgarh and Lucknow, and more are contemplated. These institutions are being developed with the help of the Co-operative Department into educative village clubs or young men's institutions. A special course and a special reader for these schools has been prepared and the co-operation of the officers of the Public Health, Agricultural, Industrial and Veterinary Departments secured. Three adult education societies for women have been started in the Lucknow district. Work in the direction of adult schools is, however, being taken up with caution to ensure that they are successful. There is a genuine demand for such schools but lack of funds and trained teachers and difficulties of supervision stand in the way. A number of district board teachers are being specially trained for this work and an Inspector of adult schools has been appointed this year to the Co-operative Department. Night classes are a feature of the work of several of the technical schools in urban areas. **Burma.**—The Government will assist as much as possible the advancement of adult education, but are not prepared to record any conclusion against official activity. **Bihar and Orissa.**—The opinion of the Royal Commission is that the advance of adult education is a matter for non-official activity rather than for Government Departments though there may be a case for assisting co-operative societies financially in the matter of adult education. This matter, therefore, is one in which the Co-operative Department will take the initiative. Although the Co-operative Department is doing a good deal towards primary education it has been able to do little for adult education. So far it has been able to open eleven night schools and some of the Central Banks have adopted a system of training adult illiterate members of societies through their literate co-members on payment of a fee of one or two rupees. But the Registrar thinks that the Department can do much in the spread of adult education provided some financial support is received from the District Boards. The recommendation of the Royal Commission has, therefore, been accepted and the local bodies are being requested to help the Co-operative Department to start schools for adult education. **Central Provinces.**—Two societies have been registered in the Jubbulpore district. **North-West Frontier Province.**—The question has been examined several times but nothing could be done for want of adequate funds. **Delhi.**—There are some 15 schools for adults, out of which five were opened during 1928-29.
114. Agricultural Middle Schools (paragraphs 456—458).	**Madras.**—The opinion of the Agricultural Advisory Committee was that one or two schools of the "Loni" type might be tried with fees charged to see if there was a demand for such education. They considered that the maintenance of school gardens need not be taken in the narrow sense but should include cultivation generally—of crops as well as flowers, though not crops on a farming scale. This recommendation will be considered by Government. The Government opened two schools, one of which is working satisfactorily but the other had to be closed for want of demand. Buildings are under construction for the opening of two more schools and proposals are under the consideration of the Director of Agriculture for the opening of another school. **Bombay.**—The position of the vernacular agricultural schools is being reviewed in the light of the recommendations of the Royal Commission.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bengal.—The local Government agree with the recommendations and the policy underlying them is being followed. A scheme for the introduction of agricultural training in selected high and middle schools has been sanctioned but is not yet in full working order. Before deciding on further action Government will await the results of the working of this scheme for an experimental period of the first seven years. **United Provinces.**—Agricultural classes have been opened and the teaching of agriculture has been started in 29 middle schools (out of a total of 591) with farms of the size that can be worked with a pair of bullocks. There was an increase of 19 during the past year. The course is one of three years, agriculture being a subject offered for the Vernacular Final Examination. In that examination 129 candidates from six schools appeared in the subject in 1928; in 1929 there were 190 candidates from eight schools. Thirteen teachers of the subject are under training at the Bulandshahr Agricultural School and provision for the training of 36 more has been made in the budget of the current financial year. An estimate of the cost of training teachers of agriculture for all the district board vernacular middle schools and of starting agricultural classes in them has been prepared. It is agreed that school farms are better than school gardens, but the cost of the former is greater than the provincial revenues can at present meet. To reduce cost and to expedite the introduction of agriculture into vernacular middle schools, it has been decided that an experimental area of about one acre to be cultivated by the teachers and boys themselves will suffice. The question of the retention by the boys of the farm produce in whole or in part is under examination. Hitherto the procedure has been to sell the produce as a set off against the expenses of the farm. The Government do not accept the Commission's conclusion that schools which provide vocational education in agriculture serve a less useful purpose than agricultural middle schools, but believe that the two types of school serve different purposes and are both necessary. They hold that the Bulandshahr school, which falls under the former category, occupies an important and useful place in the scheme of agricultural education. They consider that the useful work which is being done in this school must be supplemented by a large increase in the agricultural classes in the middle schools. With the opening of these classes there will be a heavy demand for duly qualified teachers, trained by the Agricultural Department. To meet this demand it is proposed to make the Gorakhpur school (a similar school now under construction) specialize in the training of teachers. Land has been acquired for this school at a cost of Rs. 30,000 and a provision of Rs. 1,25,000 has been made for its buildings in the budget of the current year. When the school is started it will, within the next few years, give the Education Department a sufficient number of trained teachers to expand the agricultural middle school scheme throughout the province. This Bulandshahr type of vocational school has the approval of the rural members of the Legislative Council. **Punjab.**—The scheme of teaching nature study and agriculture in vernacular middle schools in the Punjab has continued during the year and has been expanded. The number of such schools which possess farms or school gardens at present is :— (a) School Farms .. .. .. 72 (b) School Gardens .. .. 72 **Burma.**—The Director of Agriculture has been asked to report on the recommendations regarding the middle schools giving vocational education in agriculture.

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	As regards the vernacular middle schools with agriculture as an optional subject, the Directors of Public Instruction and Agriculture have reported against this system as unsuitable for Burma. The Director of Public Instruction points out that it is impossible to make a school farm pay if it is used for education. The recommendation for giving boys the whole or a part of the produce of the farm is agreed to. **Bihar and Orissa.**—There are no schools of the "Loni" type in Bihar and Orissa and at present there is no evidence of a demand for this type of vocational instruction in agriculture. The position in this province is very different from that in the United Provinces where small cultivating zamindars are so important. The United Provinces propose both to continue and develop this type of schools and their results will be watched. With regard to the teaching of agriculture in middle schools, the experiment is being tried of attaching school gardens to five such schools. The results of this experiment, which follows the lines adopted in the Punjab, will be watched. The recommendation for school farms has been accepted in principle but Government desire to await the result of the experiment referred to above before embarking on larger expenditure. A practical present difficulty is the training of teachers. **Central Provinces.**—One Anglo-Vernacular agricultural middle school exists. The establishment of others is under consideration. **North-West Frontier Province.**—The existing middle school curriculum gives a rural bias to the science course. Nothing more can be done until more funds are available.
115. Addition of course in Agriculture to curriculum of High Schools in Rural Areas (paragraph 461).	**Madras.**—The Agricultural Advisory Committee is against this proposal but the Government have not yet passed orders on the subject. **Bengal.**—The local Government agree and the policy underlying is being followed (*Vid* remarks against item 114.) **United Provinces.**—The Director of Public Instruction states that agriculture is already an optional subject for the High School Examination but so far only four schools have been recognised in the subject by the Board of High School and Intermediate Education. Divisional Inspectors have been asked to give details of high schools in their division specially suited for the teaching of agriculture, and an endeavour will be made to increase the number of High Schools teaching the subject, but funds for this purpose are limited. **Burma.**—The Director of Agriculture has been asked to report after consultation with the Director of Public Instruction. **Bihar and Orissa.**—Government have decided to wait and see the result of the experiment which is being tried in middle schools. **Central Provinces.**—It is intended to provide a course in general agricultural science in, at least, one High School as an experiment. **North-West Frontier Province.**—This concerns the Punjab University in the first instance.
116. Technical Education (paragraph 462).	**Bengal.**—The local Government agree in principle. It has already a programme for the development of technical education which is being carried out as finances permit. **United Provinces.**—The Director of Agriculture holds that the main industry of rural areas being agriculture, the provision of first class technical education in that subject in vocational schools of the Bulandshahr type is even more necessary than technical education in other industries. The Government have under consideration proposals for the further development of the Cawnpore Technological Institute, particularly, in the sugar department. The technical schools are also being expanded and improved.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Burma.—The opinion is accepted, provided the recommendation does not apply to technical schools such as the Saunders Weaving Institute, the Pagan Lacquer School and the Pottery School at Insein. **Bihar and Orissa.**—The local Government agree that, for the proper development of industries which can be carried on in rural areas, technical instruction of a high standard is essential. The Industries Department is already taking necessary steps as far as pissible. **Central Provinces.**—No action has yet been taken.
117. Qualifications for admission to Agricultural Colleges (paragraph 471).	**Madras.**—The Intermediate examination in science of the University of Madras or other Universities equivalent to it has already been prescribed as an essential qualification for admission to the Agricultural College, Coimbatore. **Bengal.**—The local Government accept the recommendation but effect can only be given to it when the Dacca Institute scheme, which is awaiting provision of funds, matures. **United Provinces.**—This question is under discussion in connection with the proposal for affiliating the Cawnpore College to the Agra University. **Punjab.**—The matter is under the consideration of Government. **Burma.**—The Director of Agriculture has been asked to report on the recommendations. **Bihar and Orissa.**—The local Government agree that the Intermediate examination in Science of the provincial university or an equivalent examination should be made an essential qualification for admission to all agricultural colleges. **Central Provinces.**—The agricultural college is affiliated to the Nagpur University. The introduction of a preliminary science examination one year after matriculation is advocated, to be followed by a three years' course at the agricultural college.
118. Teaching of Agricultural Economics and Farm Management at Agricultural Colleges (paragraph 471).	**Bengal.**—The local Government agree in principle. **United Provinces.**—Proposals for adding an Assistant Professor of Agricultural Economics to the staff at the Cawnpore College were prepared, but could not be given a place in the budget. Farm management is taught in the two years' course, both here and at Bulandshahr. The type of man indicated in paragraph 473 of the Commission's Report as needed for estate management and commercial farming is that which the Bulandshahr school aims at producing. **Burma.**—The Director of Agriculture has been asked to report on this recommendation with due regard to the possibility of giving greater prominence to teaching in agricultural economics without increase of staff. The question of paying greater attention to instruction in farm management will be borne in mind. **Bihar and Orissa.**—This will be considered when the detailed scheme for an agricultural college is prepared. **Central Provinces.**—The staff of the agricultural college has been strengthened for the purpose indicated.
119. Revision of Short Courses given at certain Agricultural Colleges (paragraphs 473-474).	**Bengal.**—The local Government agree in principle. **United Provinces.**—Short courses in engine driving and for fieldmen have for some time past been a recognized feature of the Bulandshahr school. A garden class has been added this year to give practical training in horticultural work. Similar short courses in practical cultivation are given at the Shahjahanpur, Bichpuri, and the Nagina farms. The Cawnpore Agricultural College also gave a short course of training this year to the inspectors of the Co-operative Department. A short course has been arranged at Shahjahanpur for Irrigation officers. The expansion of the system of short courses is receiving close attention and these will be developed as more funds become available.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
120. The Mandalay Agricultural College in Burma (paragraph 475).	**Burma.**—The Director of Agriculture has been asked to report on this recommendation. **Bihar and Orissa.**—The recommendation has no application to Bihar and Orissa. **Central Provinces.**—The matter has received attention. **Burma.**—The opinion is accepted. The question of using part of the college premises for the purposes of the Veterinary Department will be considered. The question of the affiliation of the college to the Rangoon University is under consideration.
121. Provision of facilities to enable passed students of Agricultural Colleges to obtain practical experience (paragraph 476).	**Bengal.**—The local Government agree in principle. **United Provinces.**—This is to some extent done on the departmental farms. **Burma.**—No special action in this recommendation is considered necessary because (*i*) the present course is made practical as far as possible and (*ii*) in the case of students joining the department arrangements will be made to give them a period of service under senior officers before they are given work of independent responsibility. **Bihar and Orissa.**—The recommendation has been accepted in principle and will be considered in detail when an agricultural college is started. **Central Provinces.**—Facilities on the lines recommended already exist.
122. Organisation of Agricultural Colleges (paragraphs 477-479).	**Bombay.**—The question of the appointment of a full-time Principal of the Poona Agricultural College is under consideration. **Bengal.**—The local Government accept the recommendations in principle although there will be no opportunity of carrying them out until the proposed Agricultural Institute at Dacca materialises. **United Provinces.**—The recommendations of the Royal Commission are receiving close attention both in conection with the cadre of the proposed new Provincial Agricultural Service, Calss I, and the proposals for affiliation to the Agra University. No changes can be made, however, until these questions are decided. **Burma.**—The opinion regarding the qualifications of Principals is accepted but the appointment of a whole-time Principal is not considered justifiable in the present financial circumstances. The recommendation regarding the extent of control by the Principal is agreed to. The proposed interchange of staff is accepted. The field of selection for the college staff has been sufficiently widened by the new rules for the Burma Agricultural Service, Class 1. The recommendation regarding the combination of research with teaching work at the agricultural colleges is accepted on the understanding that it applies to University teaching or teaching of an advanced standard. **Bihar and Orissa.**—The recommendations are generally accepted. The question as to the extent to which the Principal will exercise control over research work has been reserved for further consideration. Government agree that, when an agricultural college is started in Bihar and Orissa, both professors and assistant professors should be given an opportunity for research and be expected to do research. But they do not entirely agree that the heads of sections while largely engaged in research work should give instruction in their special subjects and that lecturers, while dealing with most of the routine of instruction, should be engaged to a limited extent in research work. They consider that the first responsibility of the professors must be their students, and they should

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	only undertake such research as is compatible with this ; an important part of their duties will be the training of future research workers. On the other hand, a special research officer's first responsibility is his research work but all such officers should give a limited number of lectures in the college on their own special subjects at times when their own work permits.
	Central Provinces.—No action has been taken. The re-organization of the service and the appointments to be borne on the cadre are under consideration.
123. Openings for passed students of Agricultural Colleges in other departments (paragraph 481).	**Bengal.**—The matter is under consideration.
	United Provinces.—This is at present the case in the departments for which they are suitable as regards qualifications. Proposals are however under consideration to go further and definitely to reserve a certain number of posts for them in certain services.
	Burma.—The Director of Agriculture has been asked to report on this.
	Bihar and Orissa.—The recommendation that an agricultural degree or diploma should be placed on the same level as a degree in arts or science as a qualification for appointments in such departments as the revenue, irrigation and co-operative will be considered when an agricultural college is established.
	Central Provinces.—No definite policy has yet been declared.
124. Agricultural Colleges for Bengal and Bihar and Orissa (paragraph 482).	**Bengal.**—The local Government agree in principle. There is a scheme for the establishment of an Agricultural Institute at Dacca which cannot be proceeded with for want of funds.
	It has been decided that the institute, if established, shall not be affiliated to any university.
	Bihar and Orissa.—The local Government would like to establish an agricultural college affiliated to the Patna University and teaching up to the degree standard in agriculture. The cost has been roughly estimated at Rs. 10,00,000 to Rs. 15,00,000 (non-recurring) according to the scheme and Rs. 1,00,000 rising to Rs. 1,50,000 (recurring) per annum. It will be very difficult for the local Government to finance this scheme from the very limited resources at its disposal unless substantial help is forthcoming from the financial proposals expected from the Statutory Commission.
CHAPTER XVI.—Rural Industries and Labour.	**Bengal.**—While agreeing in principle with the recommendation regarding the training of more progressive artisans to manage and repair improved types of machinery, Government consider that no useful action can be taken at present.
125. Government assistance in developing Manufacture of Agricultural Implements and in training Village Artisans to manage and repair improved types of Machinery (paragraphs 491 and 494).	The recommendations regarding increasing the number of implement firms and training of staff are under consideration.
	United Provinces.—Efforts have been made by the Industries Department to develop the manufacture within the province of steel shares for the Meston plough, but so far success has not been attained, and the shares produced are inferior to the present imported ones. The short courses for mechanics at the Bulandshahr Agricultural School have been described above—*vide* item 119.
	Punjab.—A training class in connection with oil engines and improved implements was held during the year in the workshop attached to the Punjab Agricultural College and instruction was given to seventeen village blacksmiths.
	Burma.—The opinions regarding increasing the number of implement firms and the training of staff are accepted. As regards the latter, the local Government are giving effect to it as far as practicable.
	The Agricultural Engineer will be instructed to institute short courses for training artisans in the management and repairs of improved types of machinery.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
126. Development of Poultry Industry (paragraph 497).	**Bihar and Orissa.**—The recommendation for Government assistance in developing manufacture of agricultural implements is under consideration. Recently the improvement of the artisan training classes in the Government technical schools has received considerable attention and an improved scheme is already before Government for their consideration. **Central Provinces.**—No action has yet been taken. **Bombay.**—The matter is under consideration. **Bengal.**—The local Government agree in principle. **United Provinces.**—The United Provinces Poultry Association under Mrs. Fawkes has continued its work and has made further efforts to extend the distribution of improved breeds of poultry among villagers. It has also continued its poultry management courses. During the year Mrs. Fawkes has been devoting special attention to certain proposals for the development of an export trade in eggs (to replace the China trade) which some English firms have been exploring. Some research work on poultry diseases has also been done at the veterinary laboratory in Lucknow. **Punjab.**—Good progress has been made during the year in the recently started poultry section of the department and eggs of improved breeds of poultry have been sold on a fair scale. **Burma.**—The opinion is accepted. The Agricultural Department is making experiments at the experimental farms and in several villages. **Bihar and Orissa.**—Nothing has been done for poultry in Bihar and Orissa in the past. The Director of Agriculture has now submitted proposals for a small poultry farm at an initial cost of Rs. 2,000 and for district work at a cost of Rs. 3,000 a year for three years in the first instance. The proposals are now under consideration.
127. Organization of Village Artisans on a co-operative basis (paragraph 501).	**Central Provinces.**—Proposals under this head are under consideration. **Bombay.**—The question of the organisation of multiple purposes societies which will also deal with the small number of artisans in each local area, and provision of Government assistance to these, viz., clerical assistance and an expert staff for advice and guidance, is under consideration. **Bengal.**—The local Government agree and the policy is being followed. **United Provinces.**—An inspector has been appointed in the Co-operative Department on work in connection with industrial and artisans' societies. **Burma.**—The Department of Cottage Industries has been dealing with this matter for many years. The recommendation does not indicate any new departure. **Bihar and Orissa.**—Attempts in the past to organise artisans into industrial co-operative societies have met with failure. In the present state of illiteracy amongst the artisans and lack of appreciation on their part of the value of co-operation, such failures are inevitable. The time is not yet ripe when any comprehensive programme of organizing village artisans on a co-operative basis could be undertaken with any hope of success. **Central Provinces.**—Twenty-seven such societies consisting mainly of weavers have been formed.
128. Government Assistance to Industry (paragraph 504).	**Bengal.**—The local Government agree in principle. **United Provinces.**—This is a large question which is fully dealt with in the annual report of the Department of Industries. The Government earnestly desire to foster industrial development by every possible means, including all those suggested by the Royal Commission.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Burma.—The opinions regarding technical education, co-operative organisation, etc., in order to assist industries, are accepted. The Cottage Industries Department is advising and making suggestions for development of the weaving, lacquer and pottery industries. The extension of assistance to other industries is not at present contemplated by that Department. The recommendation that Government should make itself responsible for a new industry in its pioneer stage is being acted upon. **Bihar and Orissa.**—The local Government have accepted the recommendations that, when a new industry is being started, they may have to make themselves responsible for it in its pioneer stage and that in the case of smaller industries they will have to be prepared for a long time to come to advise and make suggestions for development. As regards development of power, it is worthy of note that some of the most important urban areas of the province are getting rapidly electrified. The establishment of central power stations for distribution of electric power to the country side is too premature at the present moment to require consideration. **Central Provinces.**—A Bill is under consideration.
129. Qualifications of Directors of Industries (paragraph 505).	**Bengal.**—The local Government agree in principle. **United Provinces.**—A member of the Indian Civil Service became Director of Industries during the year. An additional Deputy Director (an expert in sugar manufacture) was also recruited. **Burma.**—This does not concern Burma. **Bihar and Orissa.**—The recommendation has been accepted. **Central Provinces.**—Experienced administrative officers are appointed as Directors.
130. Encouragement of Migration (paragraph 509).	**Bengal.**—The local Government agree in principle. **United Provinces.**—This question will come under examination by the Royal Commission on Labour. Public opinion is not, however, as yet disposed to go as far as the Royal Commission, particularly in regard to recruitment for Assam and emigration abroad, and the Government consider that they should move with caution towards abolishing restrictions and have replied in detail to that effect to the Government of India in connection with the proposed revision of the Assam Labour Act. **Burma.**—The encouragement of migration is not an urgent problem in Burma. **Bihar and Orissa.**—The local Government hold the very definite view that it is impossible at present to remove all restrictions on the emigration of labour to Assam. They have been in correspondence with the Government of India on this subject for the last two years and they have reported to the latter the minimum restrictions to which they are prepared to agree. Nor further action lies with the local Government. **Central Provinces.**—No action has been taken as no relief is needed.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
CHAPTER XVII.—Horticulture and Plantations. 131. Development of the cultivation of Fruit and Vegetables with special reference to picking, packing, transport and the use of suitable containers, the establishment of Regulated Markets and the improvement of Marketing Conditions generally (paragraphs 514-517).	**Bengal.**—The local Government agree in principle. **United Provinces.**—An experiment with a small fruit canning, bottling and jam making factory was made in the past at Chaubattia and work has also been done at Saharanpur. Satisfactory technical results were obtained but the factory ran at a loss owing to difficulties in obtaining containers in India and was finally abandoned by desire of the Legislative Council. That orchard is now leased to a private enterprise to which some assistance is given by the gardens staff in pruning and training. Some further experience has been obtained in methods of packing fresh fruit. No special work was done during the year. **Punjab.**—The fruit specialist and his staff are looking into the points referred to by the Royal Commission. **Burma.**—The possibilities of developing an export trade in fruits, the establishing of regulated markets for fruits and vegetables, and of improving marketing conditions generally, including transport and the provision of cold storage and of developing the home market, are questions best left to priv ate agency. **Bihar and Orissa.**—(*Vide* remarks against item 135 below.) **Central Provinces.**—No post of Horticulturist exists at present on the staff of the Agricultural Department. The marketing of oranges is under investigation.
132. Work of Agricultural Departments in the Selection and Classification of Root Stocks (paragraph 518).	**Bengal.**—The local Government agree in principle. **United Provinces.**—The gardens staff do a little work on this. **Punjab.**—Two courses, each of a fortnight's duration, were held during the year for giving instructions in preserving fruit and vegetables. **Burma.**—The Agricultural Department is experimenting in this matter. **Bihar and Orissa.**—(*Vide* remarks against item 135 below.) **Central Provinces.**—No post of Horticulturist exists at present on the staff of the Agricultural Department.
133. Experimental work by Agricultural Departments on Fruit and Vegetables (paragraph 519).	**Bombay.**—Proposals for the provision of an up-to-date laboratory for the Government Horticulturist are under consideration. **Bengal.**—The local Government agree in principle. **United Provinces.**—Nothing has been done on transport or marketing but some useful work has been done by the Plant Pathologist at Farrukhabad on the storage of potatoes (on which a bulletin has been published), on mosaic disease of potatoes, and on selection of varieties. Investigation into the shedding of immature fruit of the mangoe has also been made and traced to insufficient supplies of potassium. A remedical treatment by manuring has been used in which an interesting point is that ashes of water hyacinth have been found to have a good effect in restoring the deficiency of potash. **Burma.**—The opinion regarding investigations into marketing and transport of fruit and vegetables has been noted and accepted. The Agricultural Department is already undertaking experiments in grafting and growing of fruit trees at the experimental farms.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Bihar and Orissa.—(*Vide* remarks against item 135 below.) **Central Provinces.**—Experience is being gained in the various Government gardens under the control of the Agricultural Department.
134. Recording of Marketing Information by Marketing Officers and Agricultural Departments (paragraph 519).	**Bengal.**—The local Government agree in principle. **United Provinces.**—Beyond the publication of results in the annual departmental and circle reports, nothing was done during the year. **Burma.**—The information is given in the Horticultural Section of the Farm Reports, and leaflets will be issued when sufficient information is available. **Bihar and Orissa.**—(*Vide* remarks against item 135 below.) **Central Provinces.**—No marketing officer has yet been employed.
135. Encouragement of Private Enterprise in establishing Nurseries for Orchard Stock and production of Vegetable seeds (paragraph 519).	**Bengal.**—The local Government agree in principle. **United Provinces.**—Private enterprise at Saharanpur has been so successfully encouraged in the production of flower and vegetable seeds and of young trees for planting that the commercial receipts from that garden for the sale of similar products have been greatly diminished. Similar efforts are being made in Kumaon and elsewhere. **Punjab.**—A number of private fruit nurseries have been inspected by the Fruit Specialist, and those whose stocks are considered to be reliable and who have agreed to meet the requirements of the Department as regards their stock have been placed on an approved list of nurserymen whose stock of young fruit trees the Department can recommend. **Burma.**—The opinion is accepted. **Bihar and Orissa.**—The local Government consider that the appointment of a horticultural officer is not a pressing need and that before embarking on serious expenditure on fruit growing more data should be obtained. The Botanical Section at Sabour already undertakes the supply of mango grafts to the public. A temporary horticultural overseer has recently been appointed and attached to the Netarhat farm for work in the Chota Nagpur Division. A horticultural instructor will probably be needed at the agricultural college which the local Government hope to establish at an early date. There are a number of other recommendations of a more urgent character and, with the limited funds at their disposal, the local Government are not likely to be in a position to appoint either a horticultural or a marketing officer for some years to come. Without such officers it is not possible to undertake the work advised in recommendations 9, 13 and 15 or the enquiries proposed in recommendations 6, 7, 10, 11 and 14 in paragraph 522 of the Report of the Royal Commission on Agriculture. The whole of this chapter has, therefore, been reserved for consideration at a later date. **Central Provinces.**—This is being done so far as fruit trees are concerned.
CHAPTER XVIII.—Statistics. 136. Preparation of Forecasts of yield in the Central Provinces and Burma (paragraph 525).	**Burma.**—In Burma there already exists an adequate and efficient agency for the preparation of these forecasts in the Land Records staff. As no practical benefit would be likely to result from the transfer of the work to the Agricultural Department, which does not possess a subordinate staff sufficient for the purpose, the Government are unable to accept the recommendation. Forecasts are already being published in leaflet forms and are also receiving notice in the *Headmans' Gazette*. No further action seems necessary. **Central Provinces.**—No action has yet been taken.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
137. Improvement of Crop Statistics in Bengal, Bihar and Orissa and Assam (paragraph 527).	**Bengal.**—The matter is under consideration. **Bihar and Orissa.**—The Royal Commission recommend that the method now in use in collecting statistics of jute production in Bengal should be extended to other provinces. The local Government understand that the results obtained by this method in Bengal are far from satisfactory. They consider that it would be unwise to attempt to extend the use of the *panchayat* system to other crops until the new Central Jute Committee has examined the matter in detail and reported on its efficiency. The testing of the correctness of the formula used in arriving at the areas under mixed groups is not an urgent matter and there are more urgent problems to be dealt with first in improving area statistics. The local Government propose, however, to have tests made whenever crop cutting experiments are conducted during settlement operations to ascertain the proportions between the different constituents of a mixed crop.
138. Crop Cutting Experiments (paragraph 528).	**Bengal.**—The matter is under consideration. **United Provinces.**—No change has been made in existing practice. **Punjab.**—The whole question of the number of crop-cutting experiments and the agency by which they have been made in the past has been under consideration during the year and action has been taken to provide for a large increase in the number of crop-cutting experiments made both by the Agricultural Department and the Revenue Department. **Burma.**—The recommendation has been noted and accepted. **Bihar and Orissa.**—The local Government accept the recommendation that the formation at the headquarters of each provincial Agricultural Department of a statistical branch should precede any attempt to transfer all crop-cutting experiments from the Revenue to the Agricultural Department or to improve the technique of the experiments. This accords with their existing policy. They consider that crop-cutting experiments must generally be carried out by the revenue staff until such time as the Agricultural Department is much more strongly staffed. Recommendations Nos. 13, 14 and 15, made in paragraph 542 of the Report, are accepted by the local Government. They have already adopted these principles in the new system of crop-cutting experiments which has been under trial for the last three years and was generally introduced in 1928. **Central Provinces.**—These are conducted by the Agricultural and Revenue Departments. The staff of the Agricultural Department has not been strengthened for the purpose.
139. Appointment of a Statistical Assistant to Provincial Agricultural Departments (paragraph 538).	**Madras.**—A Statistical Assistant has already been attached to the office of the Director of Agriculture. He is an experienced member of the Madras Provincial Service. **Bengal.**—The local Government agree in principle. **United Provinces.**—No action has yet been taken owing to lack of funds. **Burma.**—In view of the present financial difficulties, the Government have decided not to pursue this question further for the present. **Bihar and Orissa.**—The local Government accept the proposal that the Agricultural Department should be strengthened by the appointment of a statistical assistant as soon as funds can be found. The average cost of the project will be Rs. 6,000 a year. It will be classed as an urgent minor project. **Central Provinces.**—(*Vide* remarks against item No. 140 below.)

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
140. Appointment of Provincial Statistical Officers (paragraph 538).	**Bombay.**—The matter is under consideration. **Bengal.**—The matter is under consideration. **United Provinces.**—The provision of a small Provincial Statistics Bureau was considered after the report of the Indian Economic Enquiry. Funds were not then available and have not been since. The Government regard this as a desirable project, but not as urgent as many others. An alternative would be to develop and expand the office of the Director of Land Records. **Burma.**—The recommendation is accepted. It is considered that the Provincial Statistical Officer should advise on matters of agricultural statistics, such as error in field experiments. He should advise also on crop forecasting and all Government statistical work. **Bihar and Orissa.**—The proposal is accepted in principle but must, for financial reasons, be postponed. It is not at present possible to frame any estimate of the cost of appointing a statistical officer and subsequently a provincial statistical bureau. **Central Provinces.**—No such appointments have yet been made, but steps have been taken to train an agricultural graduate in statistical methods.
141. Use of Non-official Agencies in collection of Agricultural Statistics (paragraph 541).	**Bengal.**—Under consideration. **United Provinces.**—The Agricultural Department at present makes a fairly extensive use of non-official reporters on the state of the crops for checking crop forecasts. A detailed proposal was completed for the creation of a Board of Economic Inquiry, modelled closely on that of the Punjab. Owing to the financial stringency, however, the provision of the money required had to be postponed till next year. The Provincial Banking Inquiry Committee is expected to provide in the course of its inquiries much useful material and experience which will serve to give the Board a good start. **Burma.**—The recommendation is accepted. **Bihar and Orissa.**—The local Government accept in principle the recommendation that more use should be made of non-official agencies in the collection of agricultural statistics and that in the present stage of development no extensive use can be made of a system of paid reporters. They propose to make an experiment in one district. The cost of introducing a system of honorary crop reporters for the whole province would be approximately Rs. 5,000 per annum, including printing, postage and compilation. **Central Provinces.**—The returns made by authorities controlling regulated markets and by industrial organisations such as ginning and pressing factories and commercial firms dealing in agricultural produce are already utilized in framing and checking crop forecasts.
CHAPTER XIX.—The Agricultural Services.	
142. Qualifications, pay and status of Directors of Agriculture (paragraph 547).	**Bombay.**—The question of the appointment of an Assistant Director of Agriculture to relieve the Director of a part of his duties is under consideration. **Bengal.**—The question is under consideration.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	United Provinces.—The Government have recommended that the position of the Director in the Royal Warrant should be raised and made equal to that of the Director of Public Instruction. Proposals about his pay are under consideration in the scheme for the new Provincial Services and are being co-ordinated with those for other heads of departments. During the past year, he has been relieved of much routine work by the temporary appointment of an administrative officer from the Provincial Executive Service as his Assistant. **Burma.**—The recommendation regarding the qualifications and recruitment of Directors of Agriculture is accepted. The method of recruitment is already provided for in the rules for the new Agricultural Service, Class I. As regards pay and status, having regard to the amount of the budget controlled and the size of the gazetted staff of the department, the Government do not accept the principle that the Agricultural Department should be on equality with the major departments, such as Public Instruction and Forests in Burma. The status depends upon the growth of the department relative to other departments. **Bihar and Orissa.**—The recommendation that the Director of Agriculture should be an officer combining administrative capacity with high scientific qualifications and that his post should be scheduled as a selection post outside the cadre is accepted. They do not, however, wish to lay down any hard and fast rule as to how it should be filled up when a vacancy occurs. The question of pay is now under consideration. As regards the position of the Director of Agriculture in the Warrant of Precedence, action will be taken presumably by the Government of India. **Central Provinces.**—The question is under the consideration of Government.
143. Qualifications, pay and status of Principals of Agricultural Colleges (paragraph 547).	**Bengal.**—The question is under consideration. **United Provinces.**—The matter of pay is under consideration; but the post is still an Indian Agricultural Service post held by a particular officer of that Service and a change is hardly indicated as long as it is held by the present incumbent. **Burma.**—The recommendations have been reserved for consideration when the question of the affiliation of the college to the University is dealt with. **Bihar and Orissa.**—The recommendation that, the post of principal of an agricultural college should be a selection post outside the cadre of the Indian Agricultural Service, has been accepted. As regards pay, the local Government do not wish to commit themselves to anything definite at this stage. The recommendation will be kept in view when an agricultural college is started and a principal for it is appointed. **Central Provinces.**—The question is under the consideration of Government.
144. Recruitment to and organisation of the new Superior Provincial Agricultural Services (paragraphs 549-554 and 568).	**Madras.**—The matter is under consideration. **Bengal.**—The matter is under consideration. **United Provinces.**—A scheme is under consideration and is now being co-ordinated with the similar schemes of other departments. It differs, however, in several respects from that advocated by the Royal Commission. A similar scheme for the superior veterinary service is at the same stage.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
	Punjab.—The terms of appointment and conditions of service of the new Superior Provincial Agricultural Service are under consideration. The service has not yet been constituted. **Burma.**—Qualifications and recruitment.—The recommendations have mostly been accepted and provided for in the Burma Agricultural Service, Class I, Rules. No action is proposed at present for strengthening the teaching side of the agricultural college. The Director of Agriculture has been asked to report on the recommendation aying down a post-graduate course as an essential qualification for direct recruitment of India trained candidates. Under the new rules promoted officers are not required to be on probation. Pay.—The recommendations regarding basic pay, etc., are accepted generally. The basic scale in the new Burma Agricultural Service, Class I, Rules, is approximately equal to that previously in force for the Indian Agricultural Service. These rules also provide for age for age equality. The Director of Agriculture has been asked to report about applying the concession to the existing members of the Indian Agricultural Service. The question of creating special posts outside the cadre of regular services will be considered when occasion arises. The recommendation regarding the passing of a Public Service Act has been brought to the notice of the departments concerned. **Bihar and Orissa.**—The proposal for the creation of the new Superior Provincial Agricultural Service is under consideration. **Central Provinces.**—The matter is under consideration.
145. Interchange of Officers between Provinces for study of special problems (paragraph 557).	**Bengal.**—While agreeing in principle with this recommendation the Government are of opinion that the question of interchange of research workers would concern the Central Research Institute, where fundamental problems are being investigated, more than provincial departments. **United Provinces.**—No action has yet been taken. **Burma.**—The Government agree that the relations should be as friendly as possible. The interchange of officers will be dealt with as occasion arises. **Bihar and Orissa.**—The recommendation has been accepted. **Central Provinces.**—No necessity for such interchange has yet arisen.
146. Grant of Study Leave to officers of new Superior Provincial Agricultural Services (paragraph 559).	**Bengal.**—The local Government agree in principle. **United Provinces.**—No action has been taken. **Burma.**—The recommendations have been noted. **Bihar and Orissa.**—The local Government have accepted the recommendation that officers in all branches of the Superior Provincial Agricultural Service should be encouraged to avail themselves of opportunities for study abroad afforded by the study leave rules and that the programmes of work in England should be arranged through the office of the High Commissioner for India. They also accept in principle the recommendation that officers on study leave in Europe should take the opportunity to visit the International Institute of Agriculture at Rome, if it possesses information bearing upon their line of work. **Central Provinces.**—The existing arrangements are considered to be satisfactory.

Subject (with paragraph of the Report).	Action taken by the Government (or Administration).
CHAPTER XX.—Miscellaneous.	
147. Establishment of Local Self-Government Institutes (paragraph 576).	**United Provinces.**—No action has yet been taken. **Burma.**—This has been brought to the notice of the Local Government Department for necessary action. **Bihar and Orissa.**—The Bombay Local Self-Government Institute is a self-constituted body, which has organised itself under the patronage of the Minister, and has chosen the Minister as its president. The corresponding body in Bihar and Orissa is the "Local Bodies Conference" which is run on political lines, and could not, therefore, be developed on the Bombay model. Similar purposes are served in this province by the Local Self-Government Board which is on a statutory basis, supplemented by occasional conferences of representatives of local bodies convened by the Minister as is done at present. The recommendation is not, therefore, acceptable to the local Government. **Central Provinces.**—An Institute has been started in Berar.
148. Establishment of Meteorological Stations of the "second order" on experimental farms in areas in which climatic conditions are of importance (paragraph 577).	**Bengal.**—The matter is under consideration. **United Provinces.**—No action has yet been taken. **Punjab.**—All departmental farms are equipped with simple meteorological apparatus such as rain gauges and maximum and minimum thermometers. In addition, during the past year, special meteorological equipment has been installed on four of the departmental experimental farms in different parts of the Province. Action is being taken at present to provide four more sets of special equipment for other farms. **Burma.**—The Director of Agriculture has been asked to report. **Bihar and Orissa.**—This recommendation does not really apply to conditions in Bihar and Orissa. The Economic Botanist maintains records of temperature, humidity and rainfall at Sabour and a Stevenson screen has been recently ordered for him. Similar observations will be extended to other farms, whenever necessary. The expenditure involved will be small. It is not proposed to do anything more in this connection at present. **Central Provinces.**—No action taken as no need for this has been felt.

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